

TRAFFIC AND PARKING IMPACT ASSESSMENT OF LIQUID WASTE FACILITY

81 Gow Street Padstow

Traffic and Parking Impact Report

Prepared for: Benbow Environmental

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1. INTRODUCTION

ML Traffic Engineers was commissioned by Benbow Environmental to undertake a traffic and parking impact assessment of a proposed liquid waste facility at 81 Gow Street in Padstow.

The vehicle access and egress to the car park is via Gow Street. The site is currently a recycling centre.

This traffic report focuses on the proposed liquid waste facility and changes in car usage and car park utilisation and additional trips from the proposed liquid waste facility.

In the course of preparing this assessment, the subject site and its environs have been inspected, plans of the development examined, and all relevant traffic and parking data collected and analysed.

2. BACKGROUND AND EXISTING CONDITIONS OF THE PROPOSED LOCATION

2.1 Location and Land Use

The proposed liquid waste facility is located to the North of Western Motorway and is in an area which is a generally industrial.

Currently the site is a recycling centre.

Figures 1 and 2 shows the location of the development site from the aerial and street map perspective respectively.

Figure 3 shows the existing site.

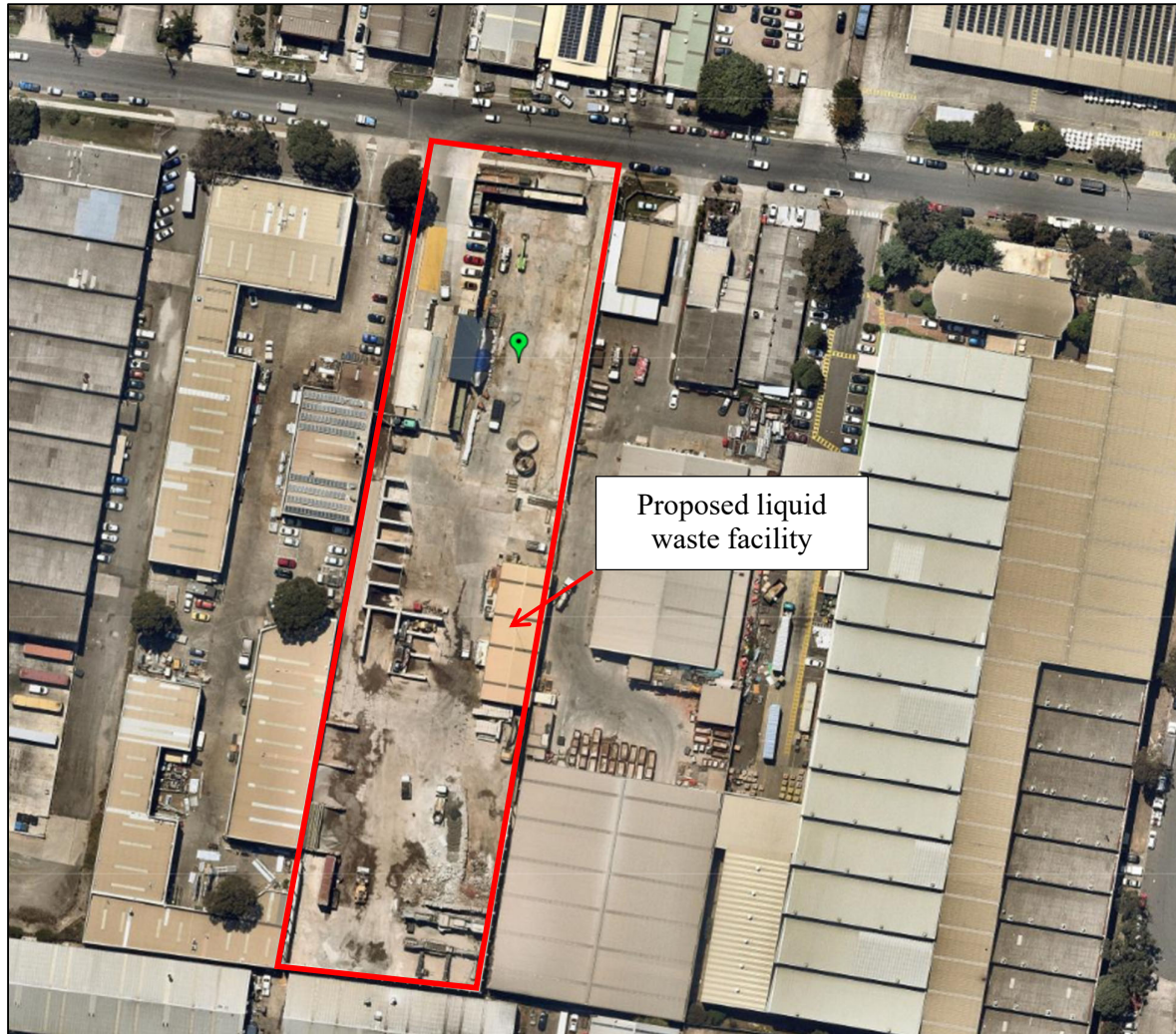


Figure 1: Location of the Subject Site on Aerial

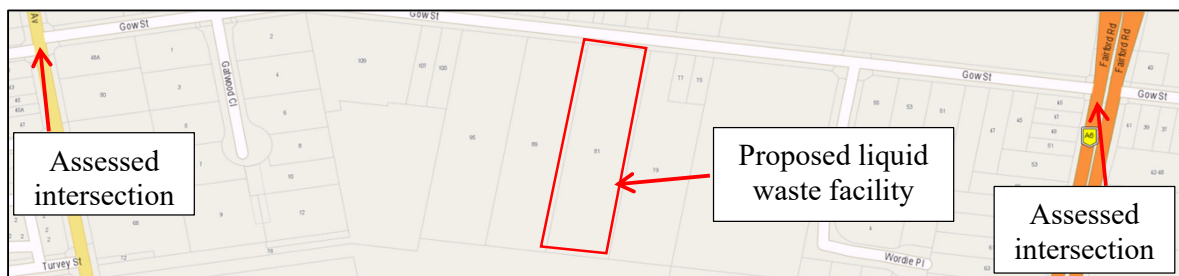


Figure 2: Street Map of the Location of the Development Site and assessed intersections



Figure 3: Development Site (81 Gow Street in Padstow)

2.2 Road Network

This section describes the roads near the proposed liquid waste facility. There are two entrance driveways to the development site from Gow Street. The driveway on the north west is the main entrance and exit to the facility. The driveway on the north east is an existing service entry and exit.

Gow Street is a local road with one lane each way with a sign posted speed limit of 50km/hr. Time un-restricted on-street parking is permitted on both sides of the road. Figure 4 shows the photograph of Gow Street.

Fairford Road is an arterial road with two lanes at the midblock on a divided carriageway. Parking is not permitted on either side of the road. The sign posted speed limit of 70km/hr near the intersection with Gow Street. Figure 5 shows the photograph of Fairford Road.

Gibson Avenue is a collector road with one lane each way and a sign posted speed limit of 60km/hr near the intersection with Gow Street. A short lane to turn right into Gow Street is available near the intersection with Gow Street. Time

unrestricted on-street parking is available on small section of the road. Figure 6 shows a photograph of Gibson Avenue.



Figure 4: Gow Street Facing West



Figure 5: Fairford Road facing North



Figure 6: Gibson Avenue facing South

2.3 Public Parking Opportunities

The development site is located in a general industrial zone. Time unrestricted on-street parking is available on both sides of Gow Street and short section of Gibson Avenue.

Site visits show that there are vacant car spaces on Gow Street with a driver needing to circulate to find a vacant car space.

2.4 Intersection Description

As part of this traffic impact assessment two intersections are assessed:

- Priority intersection of Fairford Road with Gow Street
- Stop intersection of Gibson Avenue with Gow Street and Stiles Avenue

External traffic travelling to and from the site will most likely need to travel through the above intersections.

The priority intersection of The Fairford Road with Gow Street is a three-leg intersection with only left turn movements permitted. Drivers on Gow Street need to give way to traffic on Fairford Road. Figure 7 shows a layout of the intersection using SIDRA – an industry standard intersection assessment software. The number on the lane represent the length of a short lanes in metres.

The stop intersection of Gibson Avenue with Gow Street and Stiles Avenue is a four-leg intersection. All turn movements are permitted. Drivers on Gow Street and Stiles Street must give way to vehicles on Gibson Avenue. Figure 8 shows a layout of the intersection using SIDRA.

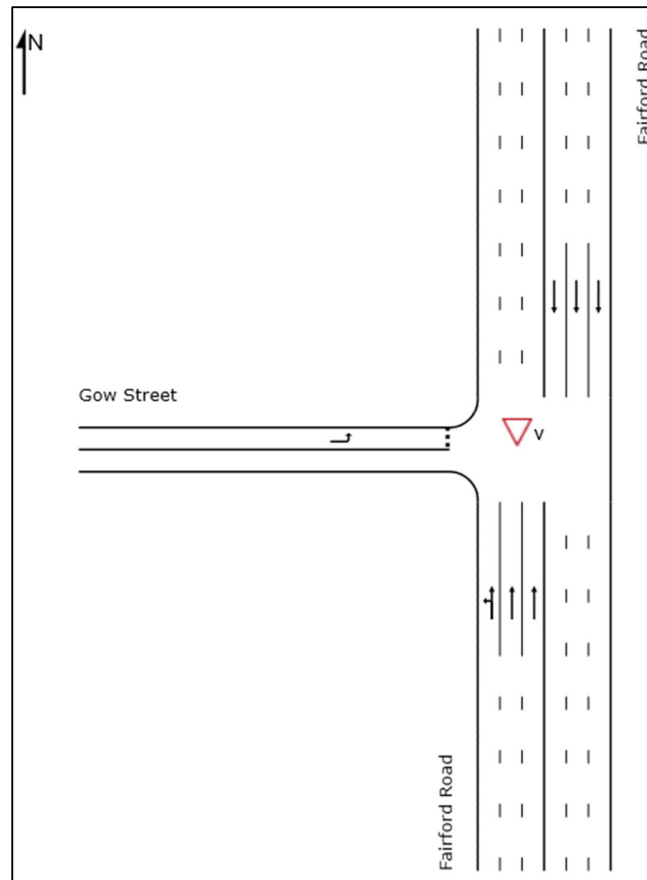


Figure 7: Priority Intersection of The Fairford Road with Gow Street (SIDRA)

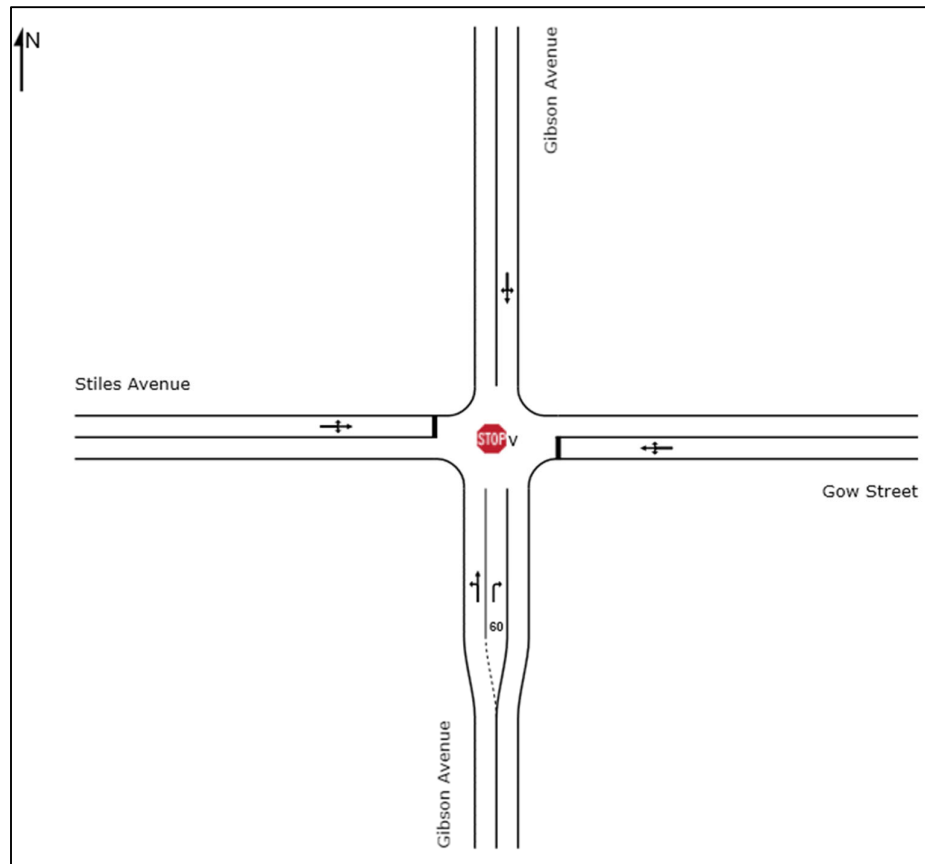


Figure 8: Stop Intersection of Gibson Avenue with Gow Street and Stiles Avenue (SIDRA)

2.5 Existing Traffic Volumes

As part of the traffic assessment, traffic counts have been undertaken at the intersections for the weekday AM and PM peak hour periods. The peak hours are 8:00am to 9:00am and 5:00pm to 6:00pm for the weekday AM and PM peak hours respectively.

Figures 9 and 10 presents in vehicle numbers the existing weekday AM and PM peak hour traffic volumes respectively. The bracketed numbers are trucks and unbracketed are cars.

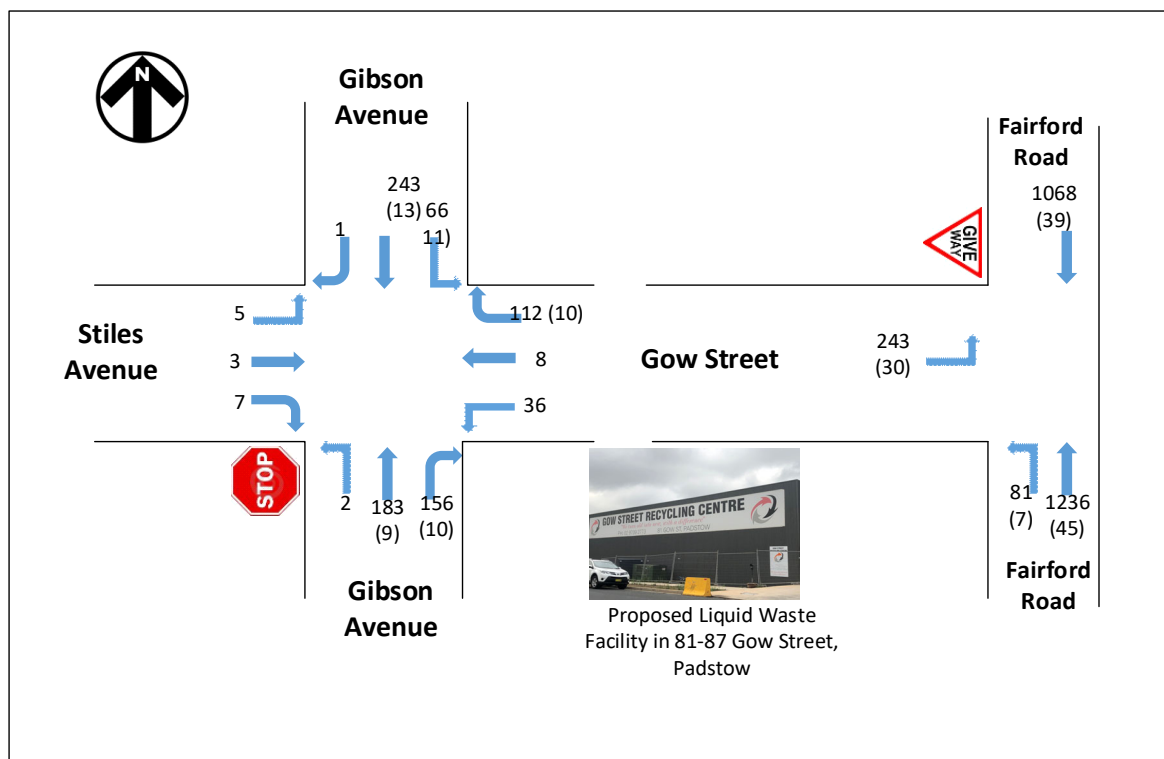


Figure 9: Existing Weekday Traffic Volumes AM Peak Hour

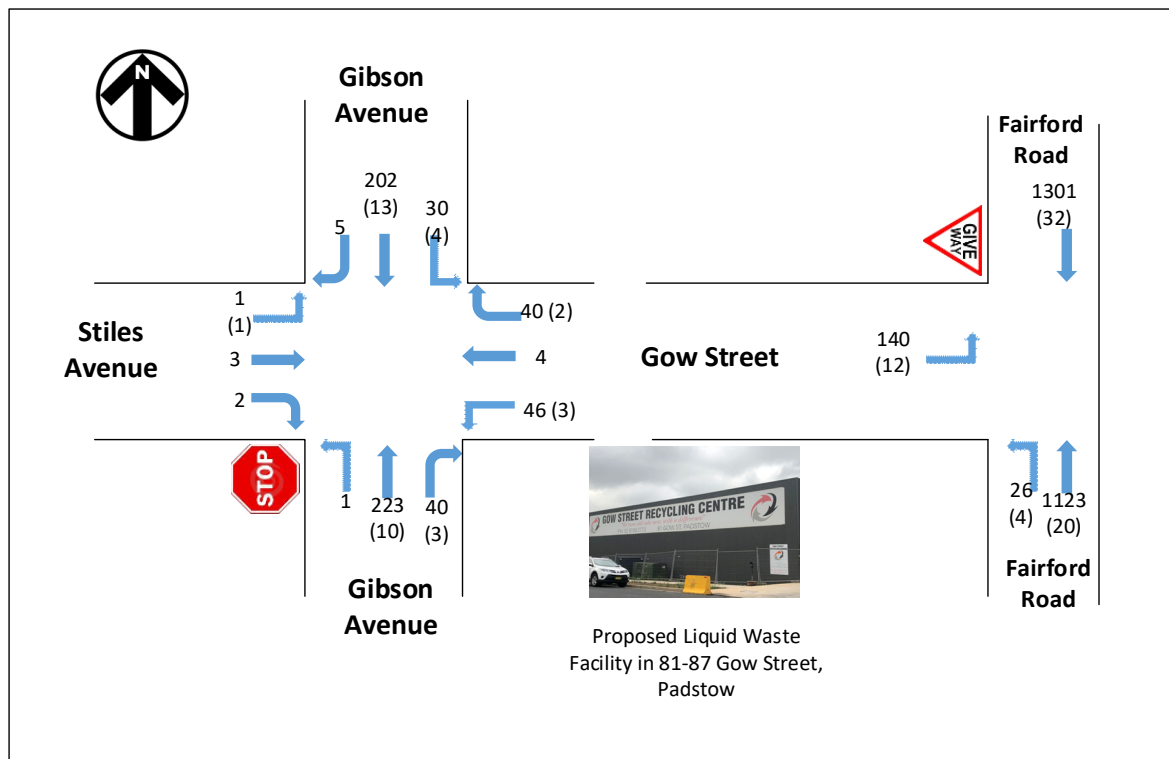


Figure 10: Existing Weekday Traffic Volumes PM Peak Hour

2.6 Intersection Assessment

An intersection assessment has been undertaken for the:

- Stop intersection of Fairford Road with Gow Street
- Priority intersection of Gibson Avenue with Gow Street and Stiles Avenue

The existing intersection operating performance was assessed using the SIDRA software package (version 8) to determine the Degree of Saturation (DS), Average Delay (AVD in seconds) and Level of Service (LoS) at each intersection. The SIDRA program provides Level of Service Criteria Tables for various intersection types. The key indicator of intersection performance is Level of Service, where results are placed on a continuum from 'A' to 'F', as shown in Table 1.

LoS	Traffic Signal / Roundabout	Give Way / Stop Sign / T-Junction control
A	Good operation	Good operation
B	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	Satisfactory	Satisfactory, but accident study required
D	Operating near capacity	Near capacity & accident study required
E	At capacity, at signals incidents will cause excessive delays.	At capacity, requires other control mode
F	Unsatisfactory and requires additional capacity, Roundabouts require other control mode	At capacity, requires other control mode

Table 1: Intersection Level of Service

The Average Vehicle Delay (AVD) provides a measure of the operational performance of an intersection as indicated below, which relates AVD to LOS. The AVD's should be taken as a guide only as longer delays could be tolerated in some locations (i.e. inner-city conditions) and on some roads (i.e. minor side street intersecting with a major arterial route). For traffic signals, the average delay over all movements should be taken. For roundabouts and priority control intersections (sign control) the critical movement for level of service assessment should be that movement with the highest average delay.

LoS	Average Delay per Vehicles (seconds/vehicle)
A	Less than 14
B	15 to 28
C	29 to 42
D	43 to 56
E	57 to 70
F	>70

Table 2: Intersection Average Delay (AVD)

The degree of saturation (DS) is another measure of the operational performance of individual intersections. For intersections controlled by traffic signals both queue

length and delay increase rapidly as DS approaches 1. It is usual to attempt to keep DS to less than 0.9. Degrees of Saturation in the order of 0.7 generally represent satisfactory intersection operation. When DS exceed 0.9 queues can be anticipated.

The result of the intersection analysis is as follows:

Priority intersection of Fairford Road with Gow Street

- All turn movements have a LoS A for the AM and PM peak hours.
- There is a spare capacity at this intersection

Stop intersection of Gibson Avenue with Gow Street and Stiles Avenue

- All turn movements have a LoS A or B for the AM and PM peak hours.
- There is spare capacity at this intersection.

The full Sidra results are presented in Appendix A.

2.7 Public Transport

The proposed liquid waste facility is located 400 metres from the nearest bus stop. M91 and M92 buses provides transport from Padstow to Paramatta and Sutherland. M91 stand is located at the corner of Fairford Road and Gow Street and M92 stand is located at the corner of Gibson Avenue and Gow Street

Figure 11 shows public transport network map. The site has access to public transport.

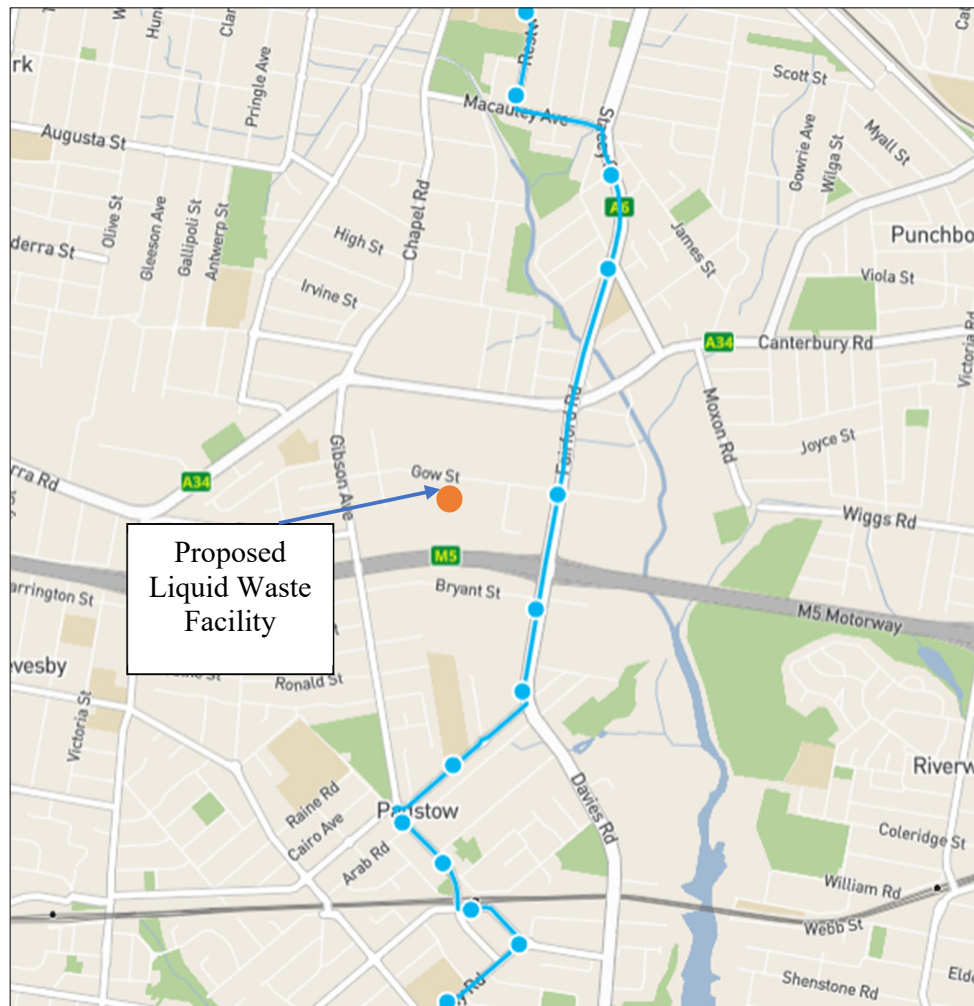


Figure 11: Public Transport Network Map

2.8 Conclusions on the Existing Conditions

The proposed liquid waste facility is in a general industrial area where there are limited vacant car spaces on Gow Street.

The nearby intersection performs well to accommodate additional traffic of the development site.

The local area is serviced by buses.

3. PROPOSED LIQUID WASTE FACILITY

The details of the proposed liquid waste facility are as follows:

Proposed Dewatering facility:

- 587m²

Proposed Office Buildings

- 182 m²

Total floor space of 769 m².

Car Spaces:

- Total of nine car spaces are currently provided. Fifteen car spaces would be provided for the proposed development.

The parking is provided on the ground floor at the main entrance (12 spaces) and within a garage of the proposed office building (3 spaces).

The vehicle access and egress to the car park area is from the main driveway entrance on Gow Street.

The liquid waste facility would operate 24/7.

The facility currently employs 9 staff. An additional 10 staff will be employed for the dewatering plant. These additional employees will be distributed over 3 shifts.

A full scaled plan of the proposed liquid waste facility is provided as part of the Development Application.

4. CAR PARKING CONSIDERATIONS

4.1 Bankstown Council Development Control Plan 2011

The car parking requirements for the proposed liquid waste facility is presented in the Bankstown Council Development Control Plan 2015 with the parking rates as follows as it applies to this development:

Industrial

- 1 per 100m² gross floor area

Office

- 1 per 100m² where the office floor space is less than 20 percent of the gross floor area with additional office at a rate of one per 40m²

Table 3 summarises the car parking requirements of the proposed liquid waste facility .

Use	GFA (m ²)	Car Parking Rate	Car Parking requirements
Factory	587	1 per 100m ²	5.87
Office	182	1 per 100m ² for first 20% of factory floor	1.53
		Remaining office space: 1 per 40m ²	0.73
Total	769		8

Note: Office space is 20% of total GFA

Table 3: Summary of Car Parking Requirements

The proposed liquid waste facility requires eight car spaces. The provision of fifteen car spaces ensure the proposed liquid waste facility complies with Council's car parking requirements.

5. VEHICLE TRAFFIC IMPACT CONSIDERATIONS

5.1 Traffic Generation for the Proposed liquid waste facility

The NSW RTA Guide to Traffic Generating Development document does not publish trip generation rates for a liquid waste facility.

The operator of the liquid waste facility has provided information car and truck generation .

The average daily trip generation of the liquid waste facility are estimated as follows:

- Liquid Waste Trucks – 92
- Solid material Trucks – 36Cars/ light vehicles - 8

This accounts for trucks both coming in and going out. Additional trips may occur due to truck size variation. This assumes 46 liquid tankers in each directed to transport 685 tonnes each day with 15 tonne capacity. It also includes 18 trucks in each direction with a 10 tonne capacity transporting 274 tonnes of solid material per day. It also includes 4 cars (staff or other vehicles).

In addition to that there is existing vehicle movements of the C & D facility:

- C&D trucks - 44
- Solid material Trucks – 36 Cars/ light vehicles - 6

This accounts for trucks both coming in and going out. Additional trips may occur due to truck size variation. This assumes 22 trucks in each directed to transport 438 tonnes each day with 10 tonne capacity trucks. It also includes 4 cars (staff or other vehicles).

It should also be said that the liquid waste truck peak hour in the day does not coincide with the commuter peak hour. In this case, the majority of liquid waste pickups would occur at the site from 7am onwards.

A liquid waste truck leaving the plant needs is required to take into account where the plant is located and the travel time from the facility to the construction site. Travelling in peak hour is inefficient since sitting in peak hour queue is unproductive time and is generally avoided. The estimated weekday peak hour trips are presented in Table 4.

Peak Hour	Origin	Destination	Total
AM	3	2	5
PM	0	3	3

Table 4: Trip generation for the Trucks of the liquid Waste Facility

The office component of the liquid waste facility will generate car trips at the rate of 2 per 100m² (as set out in the “RTA Guide to Traffic Generating Developments”). Table 5 presents the trip distribution of the office area.

Peak Hour	Origin	Destination	Total
AM	0	4	4
PM	4	0	4

Table 5: Trip generation for the Cars (from the Office area) of the liquid Waste Facility

The site (waste recycling centre) is currently operating and hence generating trips in the AM and PM peak hour. The waste recycling trip distribution is presented in Table 6.

Weekday		Origin	Destination	Total
AM	Cars	0	3	3
	Trucks	3	2	5
	Total	3	5	8
Weekday		Origin	Destination	Total
PM	Cars	2	0	2
	Trucks	2	1	3
	Total	4	1	5

Table 6: Trip generation for the existing trips of the Waste Recycling Centre for trucks and cars for the Weekday Commuter Peak Hour

The net increase in car and truck trips are presented in Table 7. The proposed liquid waste facility is a low net generator.

Weekday		Origin	Destination	Total
AM	Cars	0	1	1
	Trucks	0	0	0
	Total	0	1	1
Weekday		Origin	Destination	Total
PM	Cars	2	0	2
	Trucks	0	2	2
	Total	2	2	4

Table 7: Net Trip generation for Proposed Liquid Waste Facility for trucks and cars for the Weekday Commuter Peak Hour

5.2 Traffic Volumes

The additional development trips are assigned onto the local traffic network. The following figures present the existing with the development trips (in red for origin and blue for destination trips) for the respective peak hours.

The additional development trips represent a modest proportion of the existing traffic volumes.

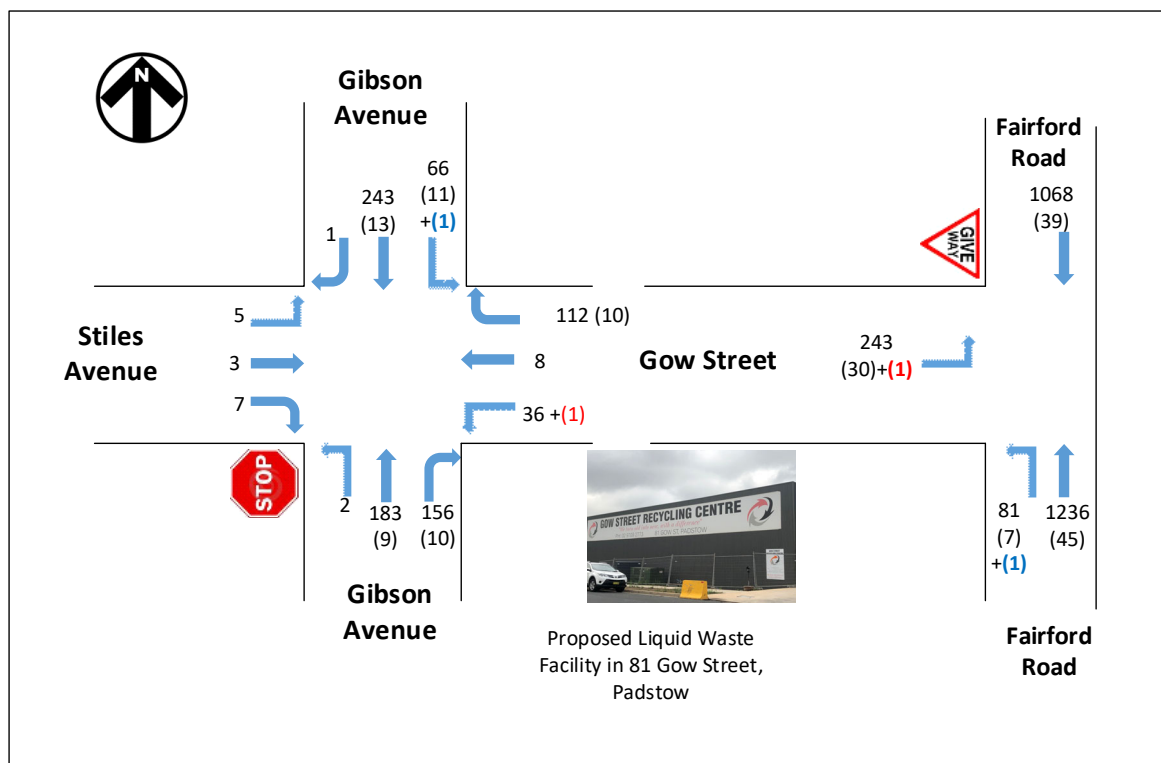


Figure 10: Weekday AM Peak Hour Traffic Volumes with proposed traffic

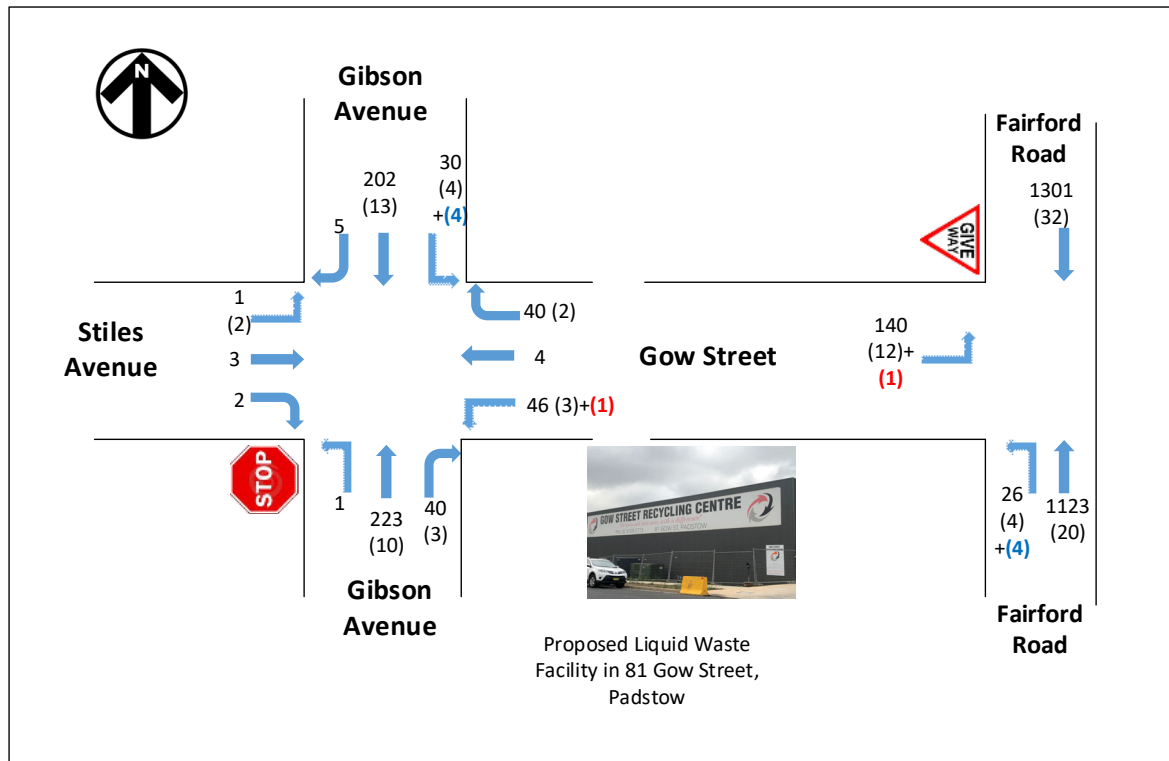


Figure 11: Weekday PM Peak Hour Traffic Volumes with proposed traffic

5.3 Intersection Assessment

An intersection assessment has been undertaken for the surveyed intersection.

The results of the intersection analysis are as follows:

Priority intersection of Fairford Road with Gow Street

- All turn movements have a LoS A for the AM and PM peak hours.
- The additional trips do not change the LoS for any turn movement or the overall intersection.

Stop intersection of Gibson Avenue with Gow Street and Stiles Avenue

- All turn movements have a LoS A or B for the AM and PM peak hours.
- The additional trips do not change the LoS for any turn movement or the overall intersection.

The full SIDRA results with liquid waste facility traffic are presented in Appendix B.

5.4 Future Intersection Assessment

The Transport for NSW has requested traffic forecast with 5 years interval from 2021 up to 2036. It is estimated that traffic growth occurs only on Fairford Road (A6) since the whole surrounding industrial area is already developed and they will not have major potential growth. It is forecasted that the growth rate on Fairford Road (A6) would be 1 percent per annum. Results of the forecasted traffic volume on adjacent road network are presented in the following figures.

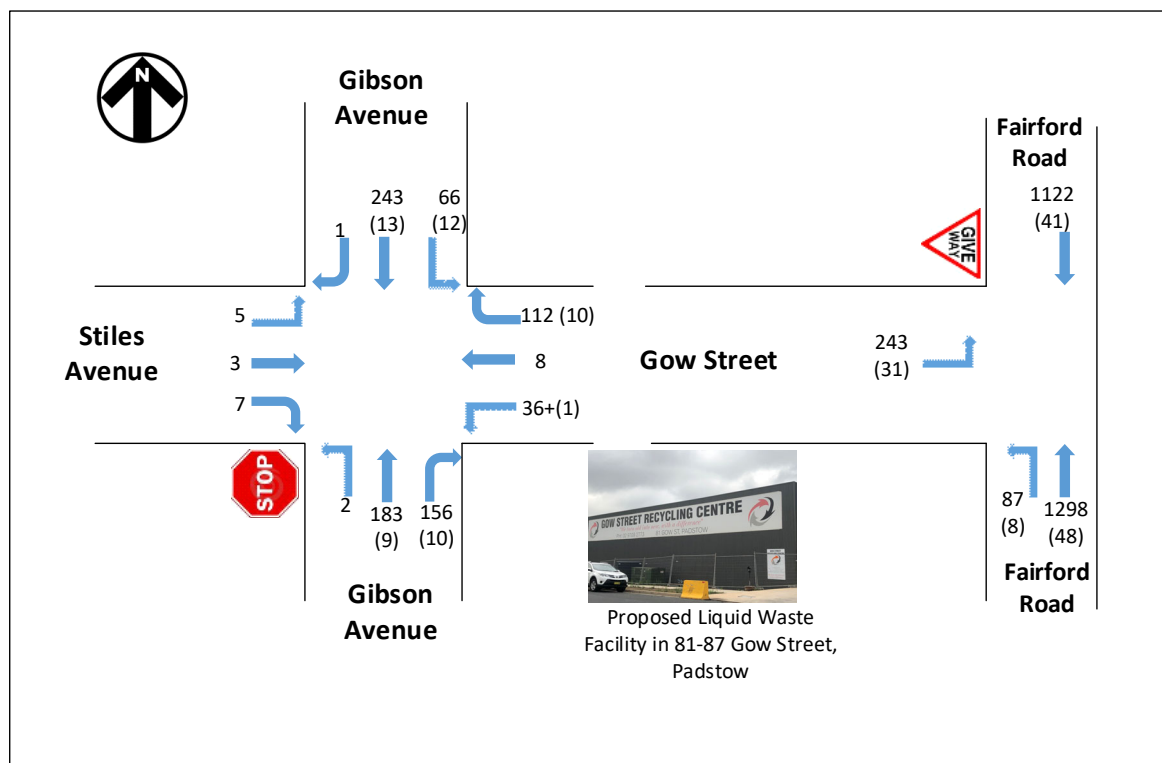


Figure 12: Weekday AM Peak Hour Traffic Volumes 2026

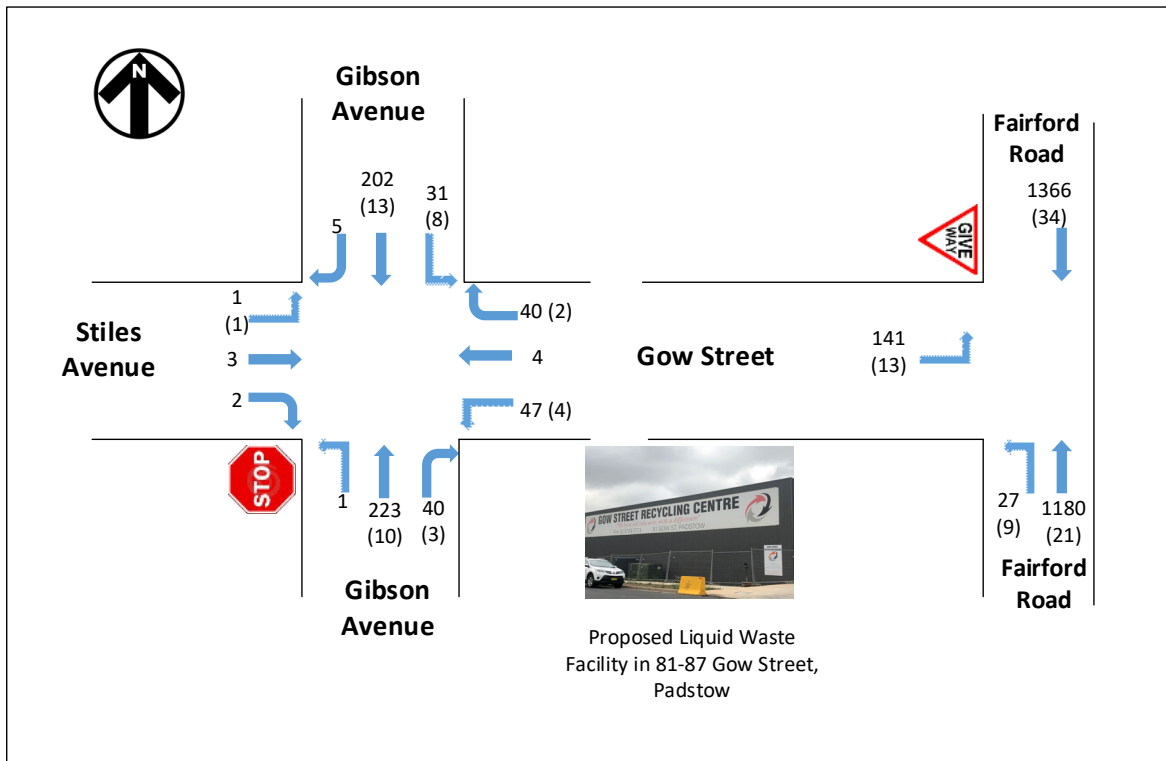


Figure 13: Weekday PM Peak Hour Traffic Volumes 2026

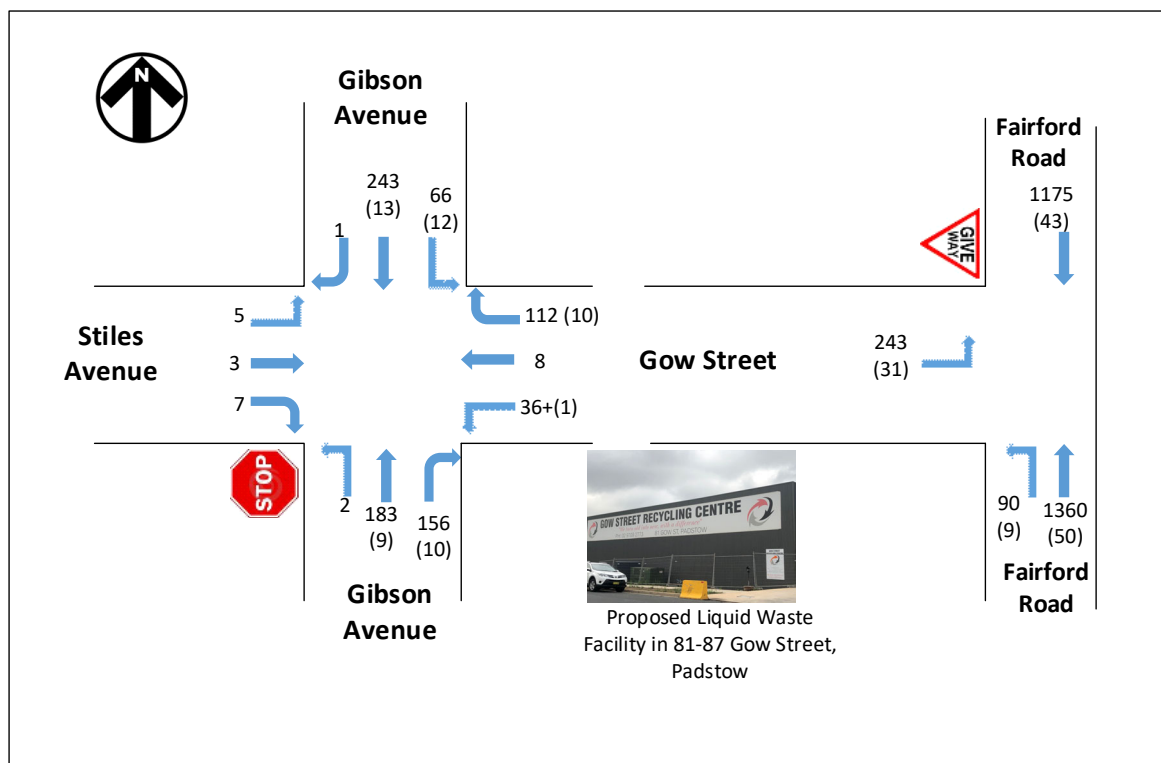


Figure 14: Weekday AM Peak Hour Traffic Volumes 2031

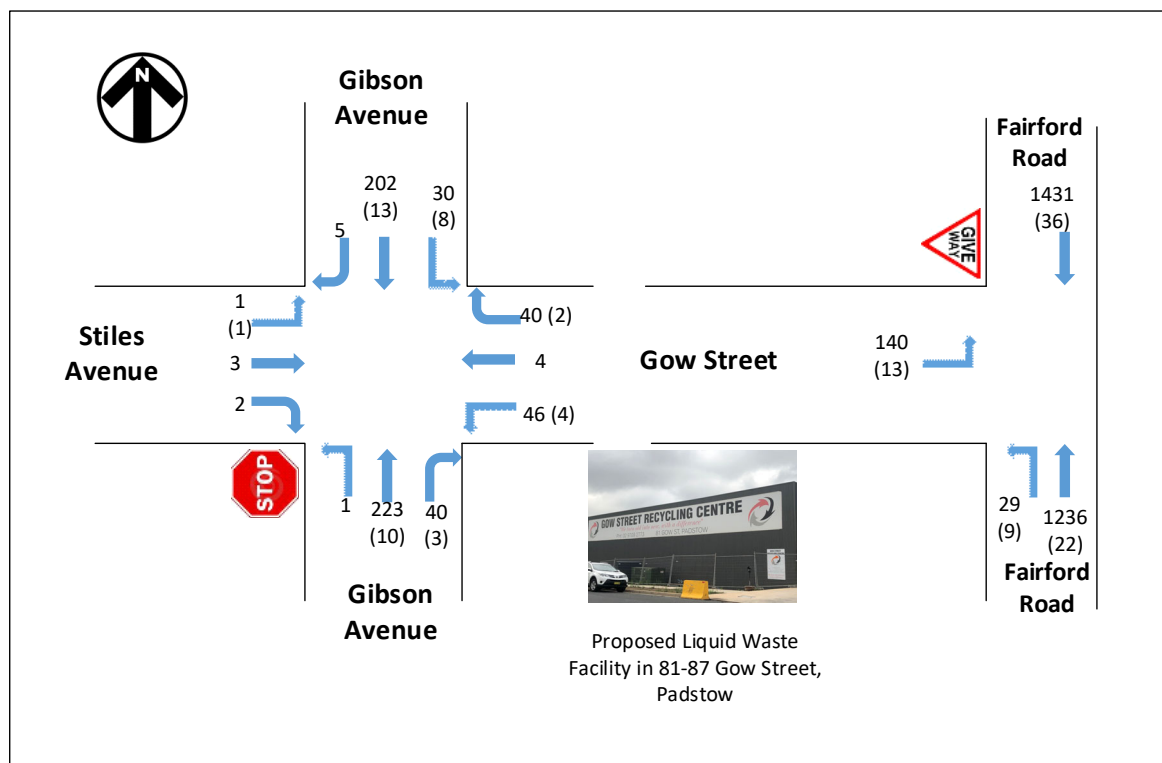


Figure 15: Weekday PM Peak Hour Traffic Volumes 2031

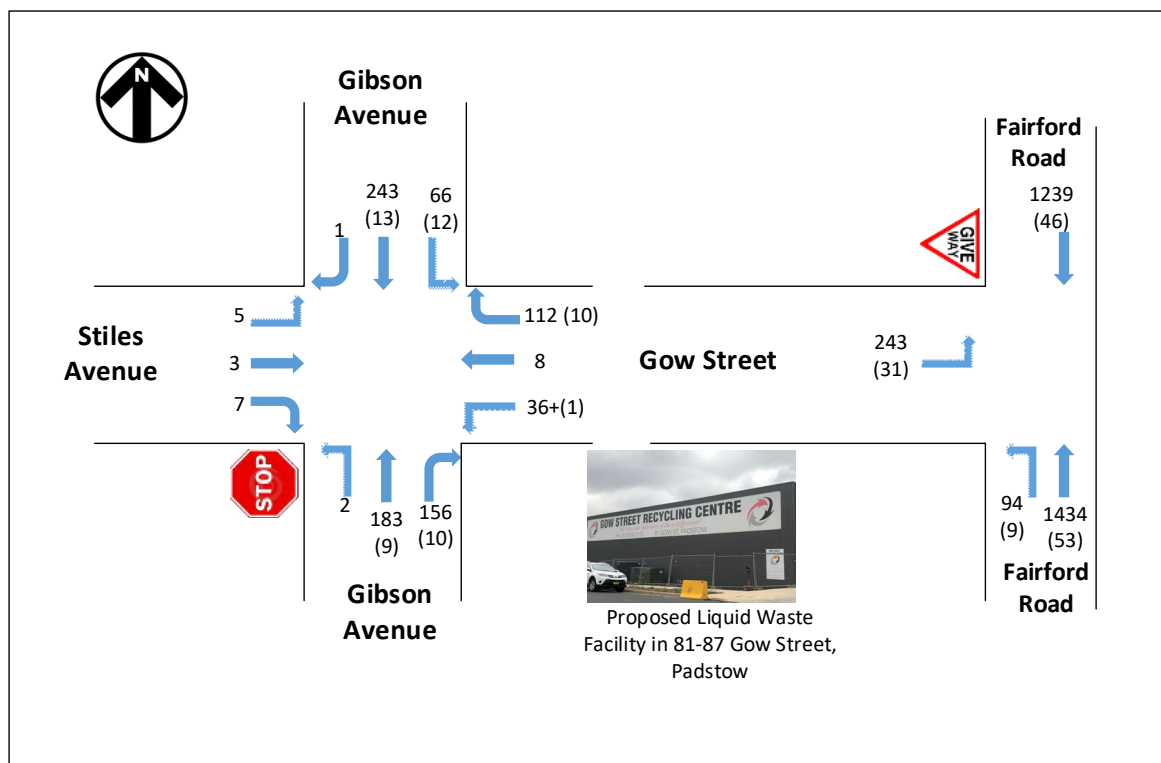


Figure 16: Weekday AM Peak Hour Traffic Volumes 2036

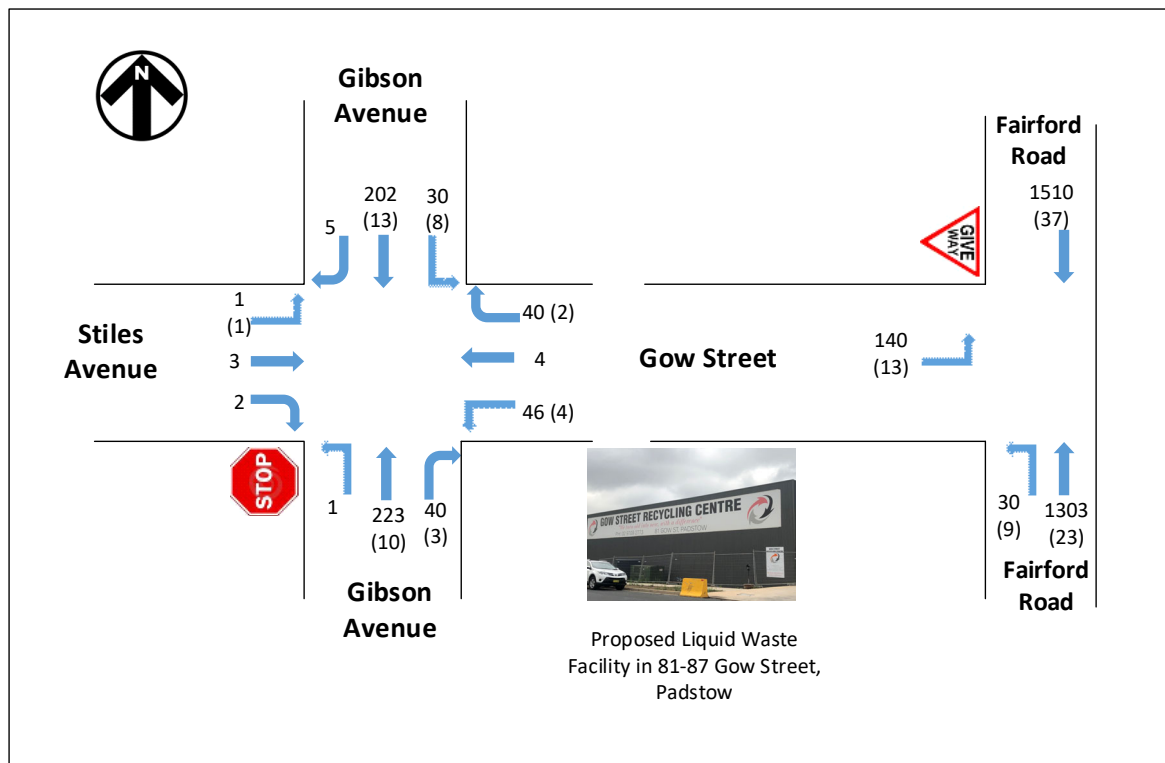


Figure 17: Weekday PM Peak Hour Traffic Volumes 2036

5.5 Comments on Forecasted Traffic Volume

The forecasted traffic volume demonstrates that both surveyed intersections will run with a good Level of Service with minor change in queueing distance and the Degree of saturation. It should be noted that the growth rate only applies on the through movements and turn movements of the Fairford Road(A6) and Gow Street intersection except the Gow Street turn movement. SIDRA intersection assessment has been carried out for all of the aforementioned scenarios.

The SIDRA modelling results are listed in the appendix C.

6. CONCLUSIONS

Based on the considerations presented in this report, it is considered that:

Parking

- The proposed liquid waste facility provides sufficient on-site car spaces and complies with the council's parking requirements.

Traffic

- The proposed liquid waste facility is a moderate trip generator for the weekday AM and PM peak hours.
- The undertaken forecast modelling for surveyed intersection demonstrates that there will be no significant change in Level of Service, queueing distance nor the degree of saturation.
- The additional trips from the proposed liquid waste facility can be accommodated at the nearby intersection without significantly affecting intersection performance, delays or queues.
- There are no traffic engineering reasons why a planning permit for the proposed liquid waste facility at 81 Gow Street in Padstow should be refused.

APPENDIX A

SIDRA Intersection Results for Existing Traffic Conditions

Movement Performance - Vehicles												
Mov ID	Turn	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Back of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Fairford Road												
1	L2	93	8.0	0.253	6.2	LOS A	0.0	0.0	0.00	0.12	0.00	61.5
2	T1	1348	3.5	0.253	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	68.9
Approach		1441	3.8	0.253	0.4	NA	0.0	0.0	0.00	0.04	0.00	68.4
North: Fairford Road												
8	T1	1165	3.5	0.204	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1165	3.5	0.204	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street												
10	L2	287	11.0	0.346	7.6	LOS A	1.7	12.9	0.52	0.77	0.60	44.8
Approach		287	11.0	0.346	7.6	LOS A	1.7	12.9	0.52	0.77	0.60	44.8
All Vehicles		2894	4.4	0.346	1.0	NA	1.7	12.9	0.05	0.10	0.06	65.5

Table A1: Weekday Intersection Performance of Fairford Road with Gow Street AM Peak Hour

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibson Avenue												
1	L2	2	0.0	0.109	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.5
2	T1	202	4.7	0.109	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	50.0
3	R2	175	6.0	0.140	6.0	LOS A	0.6	4.7	0.44	0.63	0.44	45.2
Approach		379	5.3	0.140	2.8	NA	0.6	4.7	0.20	0.29	0.20	47.6
East: Gow Street												
4	L2	38	0.0	0.615	14.3	LOS A	4.1	28.9	0.77	1.21	1.42	38.5
5	T1	85	0.0	0.615	22.8	LOS B	4.1	28.9	0.77	1.21	1.42	38.4
6	R2	118	0.0	0.615	25.1	LOS B	4.1	28.9	0.77	1.21	1.42	38.2
Approach		241	0.0	0.615	22.6	LOS B	4.1	28.9	0.77	1.21	1.42	38.3
North: Gibson Avenue												
7	L2	69	0.0	0.198	5.0	LOS A	0.3	2.1	0.06	0.12	0.06	48.7
8	T1	269	5.1	0.198	0.1	LOS A	0.3	2.1	0.06	0.12	0.06	49.2
9	R2	13	91.7	0.198	7.2	LOS A	0.3	2.1	0.06	0.12	0.06	46.6
Approach		352	7.2	0.198	1.4	NA	0.3	2.1	0.06	0.12	0.06	49.0
West: Stiles Avenue												
10	L2	5	0.0	0.039	8.2	LOS A	0.1	1.0	0.54	0.91	0.54	41.9
11	T1	3	0.0	0.039	15.3	LOS B	0.1	1.0	0.54	0.91	0.54	41.8
12	R2	7	0.0	0.039	18.5	LOS B	0.1	1.0	0.54	0.91	0.54	41.8
Approach		16	0.0	0.039	14.4	LOS A	0.1	1.0	0.54	0.91	0.54	41.8
All Vehicles		987	4.6	0.615	7.3	NA	4.1	28.9	0.30	0.47	0.46	45.3

Table A2: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Fairford Road												
1	L2	32	13.3	0.214	6.5	LOS A	0.0	0.0	0.00	0.05	0.00	63.4
2	T1	1203	1.7	0.214	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	69.5
Approach		1235	2.0	0.214	0.2	NA	0.0	0.0	0.00	0.02	0.00	69.3
North: Fairford Road												
8	T1	1403	2.4	0.244	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1403	2.4	0.244	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street												
10	L2	160	7.9	0.187	6.8	LOS A	0.7	5.3	0.46	0.68	0.46	45.3
Approach		160	7.9	0.187	6.8	LOS A	0.7	5.3	0.46	0.68	0.46	45.3
All Vehicles		2798	2.6	0.244	0.5	NA	0.7	5.3	0.03	0.05	0.03	67.6

Table A3: Weekday Intersection Performance of Fairford Road with Gow Street PM Peak Hour

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibson Avenue												
1	L2	1	0.0	0.131	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.5
2	T1	245	4.3	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	45	7.0	0.034	5.5	LOS A	0.1	1.1	0.36	0.56	0.36	45.3
Approach		292	4.7	0.131	0.9	NA	0.1	1.1	0.06	0.09	0.06	49.2
East: Gow Street												
4	L2	48	0.0	0.160	8.4	LOS A	0.6	4.4	0.49	0.92	0.49	43.4
5	T1	4	0.0	0.160	12.8	LOS A	0.6	4.4	0.49	0.92	0.49	43.3
6	R2	44	4.8	0.160	14.5	LOS A	0.6	4.4	0.49	0.92	0.49	43.0
Approach		97	2.2	0.160	11.4	LOS A	0.6	4.4	0.49	0.92	0.49	43.2
North: Gibson Avenue												
7	L2	36	11.8	0.145	4.8	LOS A	0.1	0.4	0.02	0.08	0.02	48.8
8	T1	226	6.0	0.145	0.0	LOS A	0.1	0.4	0.02	0.08	0.02	49.5
9	R2	5	0.0	0.145	5.5	LOS A	0.1	0.4	0.02	0.08	0.02	48.5
Approach		267	6.7	0.145	0.8	NA	0.1	0.4	0.02	0.08	0.02	49.4
West: Stiles Avenue												
10	L2	2	50.0	0.014	10.9	LOS A	0.1	0.4	0.52	0.89	0.52	42.6
11	T1	3	0.0	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
12	R2	2	0.0	0.014	13.7	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
Approach		7	14.3	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.0
All Vehicles		663	5.2	0.160	2.5	NA	0.6	4.4	0.11	0.22	0.11	48.2

Table A4: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue PM Peak Hour

APPENDIX B

SIDRA Intersection Results for Existing Conditions with liquid waste facility traffic

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Fairford Road												
1	L2	94	9.0	0.254	6.2	LOS A	0.0	0.0	0.00	0.12	0.00	61.4
2	T1	1348	3.5	0.254	0.0	LOS A	0.0	0.0	0.00	0.03	0.00	68.9
Approach		1442	3.9	0.254	0.4	NA	0.0	0.0	0.00	0.04	0.00	68.4
North: Fairford Road												
8	T1	1165	3.5	0.204	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1165	3.5	0.204	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street												
10	L2	288	11.3	0.348	7.6	LOS A	1.7	13.0	0.52	0.77	0.60	44.8
Approach		288	11.3	0.348	7.6	LOS A	1.7	13.0	0.52	0.77	0.60	44.8
All Vehicles		2896	4.5	0.348	1.0	NA	1.7	13.0	0.05	0.10	0.06	65.5

Table B1: Weekday Intersection Performance of Fairford Road with Gow Street AM Peak Hour with liquid waste facility traffic

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibson Avenue												
1	L2	2	0.0	0.109	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.5
2	T1	202	4.7	0.109	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	50.0
3	R2	175	6.0	0.144	6.1	LOS A	0.7	4.8	0.46	0.64	0.46	45.1
Approach		379	5.3	0.144	2.8	NA	0.7	4.8	0.21	0.30	0.21	47.6
East: Gow Street												
4	L2	39	2.7	0.608	14.2	LOS A	4.1	28.6	0.76	1.20	1.40	38.6
5	T1	85	0.0	0.608	22.4	LOS B	4.1	28.6	0.76	1.20	1.40	38.6
6	R2	118	0.0	0.608	24.6	LOS B	4.1	28.6	0.76	1.20	1.40	38.4
Approach		242	0.4	0.608	22.2	LOS B	4.1	28.6	0.76	1.20	1.40	38.5
North: Gibson Avenue												
7	L2	82	15.4	0.193	4.7	LOS A	0.0	0.1	0.00	0.13	0.00	48.6
8	T1	269	5.1	0.193	0.0	LOS A	0.0	0.1	0.00	0.13	0.00	49.3
9	R2	1	0.0	0.193	5.4	LOS A	0.0	0.1	0.00	0.13	0.00	48.4
Approach		353	7.5	0.193	1.1	NA	0.0	0.1	0.00	0.13	0.00	49.1
West: Stiles Avenue												
10	L2	5	0.0	0.038	8.2	LOS A	0.1	0.9	0.54	0.91	0.54	42.0
11	T1	3	0.0	0.038	15.4	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
12	R2	7	0.0	0.038	18.0	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
Approach		16	0.0	0.038	14.2	LOS A	0.1	0.9	0.54	0.91	0.54	41.9
All Vehicles		989	4.8	0.608	7.1	NA	4.1	28.6	0.28	0.47	0.43	45.4

Table B2: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Fairford Road												
1	L2	36	23.5	0.216	6.6	LOS A	0.0	0.0	0.00	0.05	0.00	62.2
2	T1	1203	1.7	0.216	0.0	LOS A	0.0	0.0	0.00	0.02	0.00	69.5
Approach		1239	2.4	0.216	0.2	NA	0.0	0.0	0.00	0.02	0.00	69.2
North: Fairford Road												
8	T1	1403	2.4	0.244	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1403	2.4	0.244	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street												
10	L2	161	8.5	0.188	6.8	LOS A	0.7	5.4	0.46	0.67	0.46	45.3
Approach		161	8.5	0.188	6.8	LOS A	0.7	5.4	0.46	0.67	0.46	45.3
All Vehicles		2803	2.7	0.244	0.5	NA	0.7	5.4	0.03	0.05	0.03	67.5

Table B3: Weekday Intersection Performance of Fairford Road with Gow Street PM Peak Hour with liquid waste facility traffic

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed km/h
South: Gibson Avenue												
1	L2	1	0.0	0.131	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.5
2	T1	245	4.3	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	50.0
3	R2	45	7.0	0.034	5.5	LOS A	0.1	1.1	0.36	0.56	0.36	45.3
Approach		292	4.7	0.131	0.9	NA	0.1	1.1	0.06	0.09	0.06	49.2
East: Gow Street												
4	L2	53	8.0	0.166	8.8	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
5	T1	4	0.0	0.166	12.9	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
6	R2	44	4.8	0.166	14.5	LOS B	0.6	4.8	0.49	0.93	0.49	43.0
Approach		101	6.3	0.166	11.5	LOS A	0.6	4.8	0.49	0.93	0.49	43.2
North: Gibson Avenue												
7	L2	36	11.8	0.145	4.8	LOS A	0.1	0.4	0.02	0.08	0.02	48.8
8	T1	226	6.0	0.145	0.0	LOS A	0.1	0.4	0.02	0.08	0.02	49.5
9	R2	5	0.0	0.145	5.5	LOS A	0.1	0.4	0.02	0.08	0.02	48.5
Approach		267	6.7	0.145	0.8	NA	0.1	0.4	0.02	0.08	0.02	49.4
West: Stiles Avenue												
10	L2	2	50.0	0.014	10.9	LOS A	0.1	0.4	0.52	0.89	0.52	42.6
11	T1	3	0.0	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
12	R2	2	0.0	0.014	13.8	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
Approach		7	14.3	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.0
All Vehicles		667	5.8	0.166	2.6	NA	0.6	4.8	0.11	0.22	0.11	48.2

Table B4: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue Road PM Peak Hour with liquid waste facility traffic

APPENDIX C

SIDRA Intersection Results for Predicted Future Traffic Volume with Development Traffic

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Fairford Road														
1	L2	95	8	100	8.4	0.267	6.1	LOS A	0.0	0.0	0.00	0.12	0.00	60.4
2	T1	1346	48	1417	3.6	0.267	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	68.6
Approach		1441	56	1517	3.9	0.267	0.5	NA	0.0	0.0	0.00	0.04	0.00	68.0
North: Fairford Road														
8	T1	1163	41	1224	3.5	0.214	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1163	41	1224	3.5	0.214	0.0	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street														
10	L2	274	31	288	11.3	0.357	7.9	LOS A	1.8	13.6	0.53	0.79	0.63	44.6
Approach		274	31	288	11.3	0.357	7.9	LOS A	1.8	13.6	0.53	0.79	0.63	44.6
All Vehicles		2878	128	3029	4.4	0.357	1.0	NA	1.8	13.6	0.05	0.10	0.06	65.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C1: Weekday Intersection Performance of Fairford Road with Gow Street AM Peak Hour with liquid waste facility traffic for Future Scenario 2026

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South: Gibson Avenue														
1	L2	2	0	2	0.0	0.109	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.4
2	T1	192	9	202	4.7	0.109	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.9
3	R2	166	10	175	6.0	0.144	6.1	LOS A	0.7	4.8	0.46	0.64	0.46	45.1
Approach		360	19	379	5.3	0.144	2.9	NA	0.7	4.8	0.21	0.30	0.21	47.6
East: Gow Street														
4	L2	37	1	39	2.7	0.608	14.2	LOS A	4.1	28.6	0.76	1.20	1.40	38.6
5	T1	81	0	85	0.0	0.608	22.4	LOS B	4.1	28.6	0.76	1.20	1.40	38.6
6	R2	112	0	118	0.0	0.608	24.6	LOS B	4.1	28.6	0.76	1.20	1.40	38.4
Approach		230	1	242	0.4	0.608	22.2	LOS B	4.1	28.6	0.76	1.20	1.40	38.5
North: Gibson Avenue														
7	L2	78	12	82	15.4	0.193	4.7	LOS A	0.0	0.1	0.00	0.13	0.00	48.6
8	T1	256	13	269	5.1	0.193	0.0	LOS A	0.0	0.1	0.00	0.13	0.00	49.3
9	R2	1	0	1	0.0	0.193	5.4	LOS A	0.0	0.1	0.00	0.13	0.00	48.4
Approach		335	25	353	7.5	0.193	1.1	NA	0.0	0.1	0.00	0.13	0.00	49.1
West: Stiles Avenue														
10	L2	5	0	5	0.0	0.038	8.2	LOS A	0.1	0.9	0.54	0.91	0.54	42.0
11	T1	3	0	3	0.0	0.038	15.4	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
12	R2	7	0	7	0.0	0.038	18.0	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
Approach		15	0	16	0.0	0.038	14.2	LOS A	0.1	0.9	0.54	0.91	0.54	41.9
All Vehicles		940	45	989	4.8	0.608	7.1	NA	4.1	28.6	0.28	0.47	0.43	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C2: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic for Future Scenario 2026

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Fairford Road														
1	L2	36	9	38	25.0	0.227	6.6	LOS A	0.0	0.0	0.00	0.05	0.00	61.7
2	T1	1201	21	1264	1.7	0.227	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	69.3
Approach		1237	30	1302	2.4	0.227	0.2	NA	0.0	0.0	0.00	0.02	0.00	69.1
North: Fairford Road														
8	T1	1400	34	1474	2.4	0.256	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		1400	34	1474	2.4	0.256	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.8
West: Gow Street														
10	L2	154	13	162	8.4	0.193	6.9	LOS A	0.7	5.5	0.47	0.69	0.47	45.2
Approach		154	13	162	8.4	0.193	6.9	LOS A	0.7	5.5	0.47	0.69	0.47	45.2
All Vehicles		2791	77	2938	2.8	0.256	0.5	NA	0.7	5.5	0.03	0.05	0.03	67.5

Table C3: Weekday Intersection Performance of Fairford Road with Gow Street PM Peak Hour for Future Scenario 2026

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Gibson Avenue														
1	L2	1	0	1	0.0	0.131	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.5
2	T1	233	10	245	4.3	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	43	3	45	7.0	0.034	5.5	LOS A	0.1	1.1	0.36	0.56	0.36	45.3
Approach		277	13	292	4.7	0.131	0.9	NA	0.1	1.1	0.06	0.09	0.06	49.2
East: Gow Street														
4	L2	50	4	53	8.0	0.166	8.8	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
5	T1	4	0	4	0.0	0.166	12.9	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
6	R2	42	2	44	4.8	0.166	14.5	LOS B	0.6	4.8	0.49	0.93	0.49	43.0
Approach		96	6	101	6.3	0.166	11.5	LOS A	0.6	4.8	0.49	0.93	0.49	43.2
North: Gibson Avenue														
7	L2	34	4	36	11.8	0.145	4.8	LOS A	0.1	0.4	0.02	0.08	0.02	48.8
8	T1	215	13	226	6.0	0.145	0.0	LOS A	0.1	0.4	0.02	0.08	0.02	49.5
9	R2	5	0	5	0.0	0.145	5.5	LOS A	0.1	0.4	0.02	0.08	0.02	48.5
Approach		254	17	267	6.7	0.145	0.8	NA	0.1	0.4	0.02	0.08	0.02	49.4
West: Stiles Avenue														
10	L2	2	1	2	50.0	0.014	10.9	LOS A	0.1	0.4	0.52	0.89	0.52	42.6
11	T1	3	0	3	0.0	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
12	R2	2	0	2	0.0	0.014	13.8	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
Approach		7	1	7	14.3	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.0
All Vehicles		634	37	667	5.8	0.166	2.6	NA	0.6	4.8	0.11	0.22	0.11	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C4: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic for Future Scenario 2031

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Fairford Road														
1	L2	99	9	104	9.1	0.279	6.1	LOS A	0.0	0.0	0.00	0.12	0.00	60.4
2	T1	1410	50	1484	3.5	0.279	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	68.6
Approach		1509	59	1588	3.9	0.279	0.5	NA	0.0	0.0	0.00	0.04	0.00	68.0
North: Fairford Road														
8	T1	1216	41	1280	3.4	0.224	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1216	41	1280	3.4	0.224	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street														
10	L2	274	31	288	11.3	0.366	8.2	LOS A	1.8	14.1	0.55	0.81	0.66	44.5
Approach		274	31	288	11.3	0.366	8.2	LOS A	1.8	14.1	0.55	0.81	0.66	44.5
All Vehicles		2999	131	3157	4.4	0.366	1.0	NA	1.8	14.1	0.05	0.09	0.06	65.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C5: Weekday Intersection Performance of Fairford Road with Gow Street AM Peak Hour with liquid waste facility traffic for Future Scenario 2031

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	[HV veh/h	[Total veh/h	[HV %				[Veh. veh	[Dist m				
South: Gibson Avenue														
1	L2	2	0	2	0.0	0.109	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.4
2	T1	192	9	202	4.7	0.109	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.9
3	R2	166	10	175	6.0	0.144	6.1	LOS A	0.7	4.8	0.46	0.64	0.46	45.1
Approach		360	19	379	5.3	0.144	2.9	NA	0.7	4.8	0.21	0.30	0.21	47.6
East: Gow Street														
4	L2	37	1	39	2.7	0.608	14.2	LOS A	4.1	28.6	0.76	1.20	1.40	38.6
5	T1	81	0	85	0.0	0.608	22.4	LOS B	4.1	28.6	0.76	1.20	1.40	38.6
6	R2	112	0	118	0.0	0.608	24.6	LOS B	4.1	28.6	0.76	1.20	1.40	38.4
Approach		230	1	242	0.4	0.608	22.2	LOS B	4.1	28.6	0.76	1.20	1.40	38.5
North: Gibson Avenue														
7	L2	78	12	82	15.4	0.193	4.7	LOS A	0.0	0.1	0.00	0.13	0.00	48.6
8	T1	256	13	269	5.1	0.193	0.0	LOS A	0.0	0.1	0.00	0.13	0.00	49.3
9	R2	1	0	1	0.0	0.193	5.4	LOS A	0.0	0.1	0.00	0.13	0.00	48.4
Approach		335	25	353	7.5	0.193	1.1	NA	0.0	0.1	0.00	0.13	0.00	49.1
West: Stiles Avenue														
10	L2	5	0	5	0.0	0.038	8.2	LOS A	0.1	0.9	0.54	0.91	0.54	42.0

11	T1	3	0	3	0.0	0.038	15.4	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
12	R2	7	0	7	0.0	0.038	18.0	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
Approach		15	0	16	0.0	0.038	14.2	LOS A	0.1	0.9	0.54	0.91	0.54	41.9
All Vehicles		940	45	989	4.8	0.608	7.1	NA	4.1	28.6	0.28	0.47	0.43	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C6: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic for Future Scenario 2031

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Fairford Road														
1	L2	36	9	38	25.0	0.237	6.6	LOS A	0.0	0.0	0.00	0.05	0.00	61.7
2	T1	1258	22	1324	1.7	0.237	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	69.3
Approach		1294	31	1362	2.4	0.237	0.2	NA	0.0	0.0	0.00	0.02	0.00	69.1
North: Fairford Road														
8	T1	1467	36	1544	2.5	0.268	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		1467	36	1544	2.5	0.268	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.8
West: Gow Street														
10	L2	154	13	162	8.4	0.198	7.1	LOS A	0.8	5.7	0.48	0.70	0.48	45.1
Approach		154	13	162	8.4	0.198	7.1	LOS A	0.8	5.7	0.48	0.70	0.48	45.1
All Vehicles		2915	80	3068	2.7	0.268	0.5	NA	0.8	5.7	0.03	0.04	0.03	67.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C7: Weekday Intersection Performance of Fairford Road with Gow Street PM Peak Hour for Future Scenario 2036

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Gibson Avenue														
1	L2	1	0	1	0.0	0.131	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.5
2	T1	233	10	245	4.3	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	43	3	45	7.0	0.034	5.5	LOS A	0.1	1.1	0.36	0.56	0.36	45.3
Approach		277	13	292	4.7	0.131	0.9	NA	0.1	1.1	0.06	0.09	0.06	49.2
East: Gow Street														
4	L2	50	4	53	8.0	0.166	8.8	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
5	T1	4	0	4	0.0	0.166	12.9	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
6	R2	42	2	44	4.8	0.166	14.5	LOS B	0.6	4.8	0.49	0.93	0.49	43.0
Approach		96	6	101	6.3	0.166	11.5	LOS A	0.6	4.8	0.49	0.93	0.49	43.2
North: Gibson Avenue														
7	L2	34	4	36	11.8	0.145	4.8	LOS A	0.1	0.4	0.02	0.08	0.02	48.8
8	T1	215	13	226	6.0	0.145	0.0	LOS A	0.1	0.4	0.02	0.08	0.02	49.5
9	R2	5	0	5	0.0	0.145	5.5	LOS A	0.1	0.4	0.02	0.08	0.02	48.5
Approach		254	17	267	6.7	0.145	0.8	NA	0.1	0.4	0.02	0.08	0.02	49.4
West: Stiles Avenue														
10	L2	2	1	2	50.0	0.014	10.9	LOS A	0.1	0.4	0.52	0.89	0.52	42.6
11	T1	3	0	3	0.0	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
12	R2	2	0	2	0.0	0.014	13.8	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
Approach		7	1	7	14.3	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.0
All Vehicles		634	37	667	5.8	0.166	2.6	NA	0.6	4.8	0.11	0.22	0.11	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C8: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic for Future Scenario 2031

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Fairford Road														
1	L2	103	9	108	8.7	0.294	6.2	LOS A	0.0	0.0	0.00	0.12	0.00	60.5
2	T1	1487	53	1565	3.6	0.294	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	68.6
Approach		1590	62	1674	3.9	0.294	0.5	NA	0.0	0.0	0.00	0.04	0.00	68.0
North: Fairford Road														
8	T1	1285	46	1353	3.6	0.237	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.9
Approach		1285	46	1353	3.6	0.237	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.9
West: Gow Street														
10	L2	274	31	288	11.3	0.378	8.5	LOS A	1.9	14.8	0.57	0.84	0.70	44.3
Approach		274	31	288	11.3	0.378	8.5	LOS A	1.9	14.8	0.57	0.84	0.70	44.3
All Vehicles		3149	139	3315	4.4	0.378	1.0	NA	1.9	14.8	0.05	0.09	0.06	65.7

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C9: Weekday Intersection Performance of Fairford Road with Gow Street AM Peak Hour with liquid waste facility traffic for Future Scenario 2036

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Gibson Avenue														
1	L2	2	0	2	0.0	0.109	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.4
2	T1	192	9	202	4.7	0.109	0.0	LOS A	0.0	0.0	0.00	0.01	0.00	49.9
3	R2	166	10	175	6.0	0.144	6.1	LOS A	0.7	4.8	0.46	0.64	0.46	45.1
Approach		360	19	379	5.3	0.144	2.9	NA	0.7	4.8	0.21	0.30	0.21	47.6
East: Gow Street														
4	L2	37	1	39	2.7	0.608	14.2	LOS A	4.1	28.6	0.76	1.20	1.40	38.6
5	T1	81	0	85	0.0	0.608	22.4	LOS B	4.1	28.6	0.76	1.20	1.40	38.6
6	R2	112	0	118	0.0	0.608	24.6	LOS B	4.1	28.6	0.76	1.20	1.40	38.4
Approach		230	1	242	0.4	0.608	22.2	LOS B	4.1	28.6	0.76	1.20	1.40	38.5
North: Gibson Avenue														
7	L2	78	12	82	15.4	0.193	4.7	LOS A	0.0	0.1	0.00	0.13	0.00	48.6
8	T1	256	13	269	5.1	0.193	0.0	LOS A	0.0	0.1	0.00	0.13	0.00	49.3
9	R2	1	0	1	0.0	0.193	5.4	LOS A	0.0	0.1	0.00	0.13	0.00	48.4
Approach		335	25	353	7.5	0.193	1.1	NA	0.0	0.1	0.00	0.13	0.00	49.1
West: Stiles Avenue														

10	L2	5	0	5	0.0	0.038	8.2	LOS A	0.1	0.9	0.54	0.91	0.54	42.0
11	T1	3	0	3	0.0	0.038	15.4	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
12	R2	7	0	7	0.0	0.038	18.0	LOS B	0.1	0.9	0.54	0.91	0.54	41.9
Approach		15	0	16	0.0	0.038	14.2	LOS A	0.1	0.9	0.54	0.91	0.54	41.9
All Vehicles		940	45	989	4.8	0.608	7.1	NA	4.1	28.6	0.28	0.47	0.43	45.4

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C10: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic for Future Scenario 2036

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] veh/h	[Total veh/h	HV] %	v/c	sec		[Veh. veh	Dist] m				km/h
South: Fairford Road														
1	L2	36	9	38	25.0	0.237	6.6	LOS A	0.0	0.0	0.00	0.05	0.00	61.7
2	T1	1258	22	1324	1.7	0.237	0.1	LOS A	0.0	0.0	0.00	0.02	0.00	69.3
Approach		1294	31	1362	2.4	0.237	0.2	NA	0.0	0.0	0.00	0.02	0.00	69.1
North: Fairford Road														
8	T1	1467	36	1544	2.5	0.268	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	69.8
Approach		1467	36	1544	2.5	0.268	0.1	NA	0.0	0.0	0.00	0.00	0.00	69.8
West: Gow Street														
10	L2	154	13	162	8.4	0.198	7.1	LOS A	0.8	5.7	0.48	0.70	0.48	45.1
Approach		154	13	162	8.4	0.198	7.1	LOS A	0.8	5.7	0.48	0.70	0.48	45.1
All Vehicles		2915	80	3068	2.7	0.268	0.5	NA	0.8	5.7	0.03	0.04	0.03	67.5

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C11: Weekday Intersection Performance of Fairford Road with Gow Street PM Peak Hour for Future Scenario 2036

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total	HV]	[Total	HV]				[Veh.	Dist]				
		veh/h	veh/h	veh/h	%	v/c	sec		veh	m				km/h
South: Gibson Avenue														
1	L2	1	0	1	0.0	0.131	4.6	LOS A	0.0	0.0	0.00	0.00	0.00	49.5
2	T1	233	10	245	4.3	0.131	0.0	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
3	R2	43	3	45	7.0	0.034	5.5	LOS A	0.1	1.1	0.36	0.56	0.36	45.3
Approach		277	13	292	4.7	0.131	0.9	NA	0.1	1.1	0.06	0.09	0.06	49.2
East: Gow Street														
4	L2	50	4	53	8.0	0.166	8.8	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
5	T1	4	0	4	0.0	0.166	12.9	LOS A	0.6	4.8	0.49	0.93	0.49	43.3
6	R2	42	2	44	4.8	0.166	14.5	LOS B	0.6	4.8	0.49	0.93	0.49	43.0
Approach		96	6	101	6.3	0.166	11.5	LOS A	0.6	4.8	0.49	0.93	0.49	43.2
North: Gibson Avenue														
7	L2	34	4	36	11.8	0.145	4.8	LOS A	0.1	0.4	0.02	0.08	0.02	48.8
8	T1	215	13	226	6.0	0.145	0.0	LOS A	0.1	0.4	0.02	0.08	0.02	49.5
9	R2	5	0	5	0.0	0.145	5.5	LOS A	0.1	0.4	0.02	0.08	0.02	48.5
Approach		254	17	267	6.7	0.145	0.8	NA	0.1	0.4	0.02	0.08	0.02	49.4
West: Stiles Avenue														
10	L2	2	1	2	50.0	0.014	10.9	LOS A	0.1	0.4	0.52	0.89	0.52	42.6
11	T1	3	0	3	0.0	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
12	R2	2	0	2	0.0	0.014	13.8	LOS A	0.1	0.4	0.52	0.89	0.52	43.1
Approach		7	1	7	14.3	0.014	12.3	LOS A	0.1	0.4	0.52	0.89	0.52	43.0
All Vehicles		634	37	667	5.8	0.166	2.6	NA	0.6	4.8	0.11	0.22	0.11	48.2

Site Level of Service (LOS) Method: Delay (RTA NSW). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Table C12: Weekday Intersection Performance of Gibson Avenue with Gow Street and Stiles Avenue AM Peak Hour with liquid waste facility traffic for Future Scenario 2036

CARPARK AND DRIVEWAY CERTIFICATION OF A PROPOSED LIQUID WASTE FACILITY

81 Gow Street in Padstow

Prepared for: Benbow Environmental

A206205N (Version 1c)

June 2021

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1. INTRODUCTION

ML Traffic Engineers was commissioned by Benbow Environmental to prepare a car and truck parking certification report of a liquid waste facility at 81 Gow Street in Padstow.

The car park is on ground level with vehicle access and egress via Gow Street. A total of 15 car spaces are provided of which three are in the garage and twelve in the main carpark area.

Reference is made to AS2890.1 (2004), AS2890.2 (2018) and Council's Development Control Plan for compliance.

2. DRIVEWAY

The details of the driveway from Gow Street into the ground level are as follows from the perspective of the inbound movement for description purposes:

- The driveway at the property line is 15.8 metres wide and narrows to 13.8 metres.
- Gradients are less than 5 percent.

3. CAR SPACES

The details of the car parking areas are as follows:

- The car parking aisle is 13 metres minimum
- The general 90-degree car spaces are 2.5 metres wide minimum with a length of 5.5 metres

4. WHEEL WASH AND LOADING BAYS

A wheel wash is provided with a length of 12 metres and a width of 6 metres.

Several loading and waiting bays are provided on site for trucks as shown in the loading and unloading site plan.

5. SWEPT PATHS

A swept turning path analysis is performed using 19-metre-long truck and 12.5-metre-long truck to confirm that vehicle movements are adequate.

The following Swept Paths have been performed:

- 19-metre-long articulated truck
- 12.5-metre-long truck
- The tank trailer
- B-double entering and leaving the site

All movements show adequate manoeuvrability.

The swept paths are provided in the Appendix A of this report.

6. CAR SIGHT DISTANCE

The car driver's sight distance requirement to enter the external road is stated in Figure 3.2 of AS2890.1.

The sight distance varies according to the speed of the external road. Gow Street has a default speed limit of 50km/hr.

The minimum sight distance required is 45 metres. Site measurements showed that the minimum sight distance looking left or right is met without permanent obstructions.

The pedestrian sight triangle (as set out in Figure 3.3) is met as well.

7. TRUCK SIGHT DISTANCE

The car driver's sight distance requirement to enter the external road is stated in Figure 3. of AS2890.2.

The sight distance varies according to the speed of the external road. Gow Street has a default speed limit of 50km/hr.

The minimum sight distance required is 69 metres. Site measurements showed that the minimum sight distance looking left or right is met without permanent obstructions.

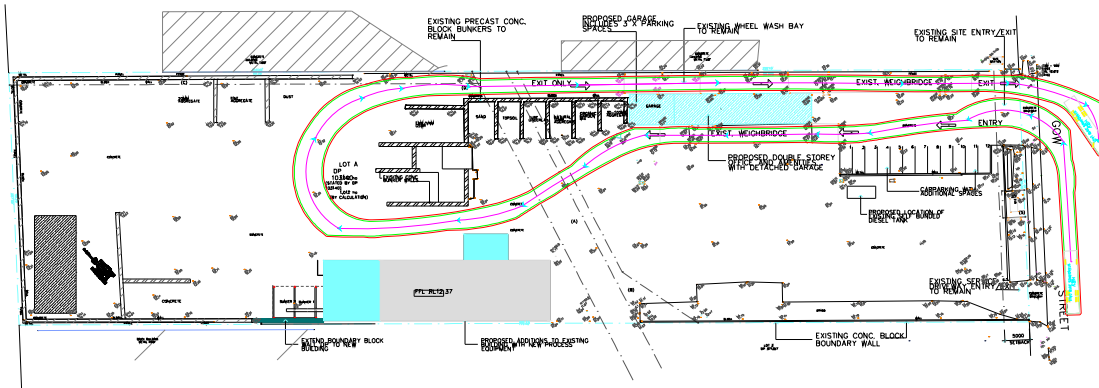
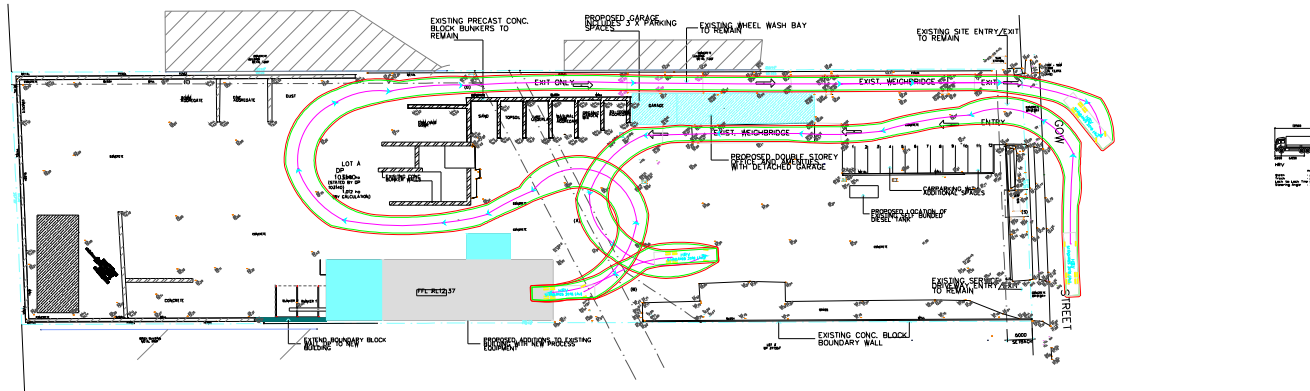
The pedestrian sight triangle (as set out in Figure 3.3) is met as well.

8. CONCLUSIONS AND RECOMMENDATIONS

The car parking area and driveway is compliant with Australian Standards and Council's DCP.

APPENDIX A

Truck Swept Paths



**TRAFFIC MANAGEMENT PLAN
FOR GOW STREET RECYCLING CENTRE PTY LTD
81 GOW STREET, PADSTOW**

Prepared for: Gow Street Recycling Centre
NSW EPA

Prepared by: Kate Barker, Environmental Scientist
R T Benbow, Principal Consultant

Report No: 191290_TMP_Rev2
July 2021
(Released: 8 July 2021)



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Contents	Page
1. INTRODUCTION	1
1.1 Scope of Works	1
1.2 Traffic Generation	2
1.3 Traffic Impact SIDRA Summary	3
2. SITE LAYOUT	4
2.1 On-Site Traffic	5
3. TRAFFIC MANAGEMENT	6
3.1 Traffic Entrance and Egress Procedure	6
3.1.1 Main Driveway Entrance	6
3.1.2 Truck Egress	6
3.2 Unloading/Loading	7
3.2.1 Dewatering Facility	9
3.2.2 C&D facility	9
3.3 Traffic Queuing	9
3.3.1 Emergency Plant Shut Down	12
3.4 Parking Arrangements	12
3.5 Notification on Arrival	12
3.5.1 Trucks	12
3.5.2 Cars	12
3.6 Responsibilities	13
3.7 Speed Limits	13
3.8 Traffic Control Officer	14
3.9 Site Inspections & Audits	14
3.10 Incident Reporting	14
4. LIMITATIONS	15

Tables	Page
Table 1-2: Truck and Car Distribution	2
Table 1-3: Level of Service (LoS) for intersections	3
Table 3-1: Vehicle Waiting and Activity - Peak Operations	9

Figures	Page
Figure 2-1: Aerial view of the site	4
Figure 3-1: 81 Gow Street Entrance Driveway	6
Figure 3-2: 81 Gow Street Exit Driveway	7
Figure 3-3: Loading, Unloading and Waiting	8
Figure 3-4: Truck queuing	11
Figure 3-5: Speed Limit Sign	14

Attachments

Attachment 1: Site Plans



1. INTRODUCTION

Benbow Environmental have been engaged by Gow Street Recycling Centre (GSRC) to prepare a traffic management plan (TMP) for the proposed liquid waste processing facility located at 81 Gow Street, Padstow NSW 2211.

The site contains an existing construction and demolition (C&D) resource recovery facility and operates under an existing consent from Canterbury-Bankstown Council (DA-51/1997). The facility is approved to process up to 80,000 tonnes of waste per year and store 7,300 tonnes of waste at any one time. It undertakes scheduled activities on site (resource recovery and waste storage), and as such holds an Environment Protection Licence (EPL) (No. 10943).

GSRC seeks to modify consent to operate a liquid waste dewatering facility on site. The dewatering plant would process up to 250,000 tonnes of liquid waste per year and have a maximum processing capacity of 1,500 tonnes per day.

The purpose of the TMP is to detail how risks associated with plant and vehicle traffic are managed at the site on a daily basis.

A traffic and parking assessment has been undertaken and found that the proposed design of the development is acceptable. The nearby intersections perform well to accommodate additional traffic of the development site. The provision of fifteen (15) on site car parking spaces will accommodate the expected car requirements for staff.

Entrance and egress to the site is via Gow Street. The expected peak truck demand for the proposed development is four (4) per hour.

1.1 SCOPE OF WORKS

The scope of this TMP is limited to the following:

- Summary of traffic generation;
- Traffic entrance and egress;
- Procedure for traffic control officer receiving trucks on-site;
- Procedure for truck queuing;
- To ensure the safety of employees, contractors and traffic while on site;
- Encourage safe access and manoeuvrability of all traffic movements while on site;
- Establish dedicated loading/unloading areas, pedestrian walkways and site speed limits;
- Minimise conflict between on-site vehicles, cars and truck traffic;
- Minimise delays and disruptions to the business;
- Reduce the potential for tracking of sediment onto public roadways; and
- Identify and manage traffic hazards.

The TMP does not apply to traffic management related to construction work. Any proposed construction work on site will require a separate, specific construction traffic management plan.

1.2 TRAFFIC GENERATION

The approved operational hours for the C&D facility are: 06:00 and 18:00 Monday to Friday, and 07:00 and 18:00 on weekends. The existing facility will continue to operate within these hours.

The dewatering facility proposes to operate for 24 hours/seven days a week. However, the majority of liquid waste pickups would occur at the site from 7am onwards. Travelling in peak hour is inefficient since sitting in peak hour queue is unproductive time and is generally avoided. Peak vehicle movements are Ten (10) trucks per hour. Table 1-1 displays an example of the truck distribution over a standard 24-hour period.

The peak hours are 8:00am to 9:00am and 5:00pm to 6:00pm for the weekday AM and PM peak hours respectively.

Table 1-1: Truck and Car Distribution

Time	C & D facility				Dewatering Facility			
	Incoming trucks per hour		Outgoing trucks per hour		Incoming trucks per hour		Outgoing trucks per hour	
	Light	Heavy	Light	Heavy	Light	Heavy	Light	Heavy
1:00	NA	NA	NA	NA	0	1	0	1
2:00	NA	NA	NA	NA	0	1	0	1
3:00	NA	NA	NA	NA	0	1	0	1
4:00	NA	NA	NA	NA	0	2	0	2
5:00	NA	NA	NA	NA	0	2	0	2
6:00	0	1	0	1	0	2	0	2
7:00	0	1	0	1	0	2	0	1
8:00	3	2	0	3	4	2	0	3
9:00	0	2	0	1	0	3	0	4
10:00	0	3	0	2	0	4	0	5
11:00	0	3	0	3	0	5	0	5
12:00	0	3	0	3	0	5	0	5
13:00	0	2	0	2	0	5	0	5
14:00	0	2	0	2	0	5	0	5
15:00	0	1	0	1	0	4	0	4
16:00	0	1	0	1	0	3	0	4
17:00	0	1	3	2	0	3	4	0
18:00	NA	NA	NA	NA	0	3	0	3
19:00	NA	NA	NA	NA	0	3	0	3
20:00	NA	NA	NA	NA	0	3	0	3
21:00	NA	NA	NA	NA	0	2	0	2
22:00	NA	NA	NA	NA	0	1	0	1
23:00	NA	NA	NA	NA	0	1	0	1
0:00	NA	NA	NA	NA	0	1	0	1
Total	3	22	3	22	4	64	4	64
	6 light/day and 44 heavy/per day				8 light/day and 128 heavy/day			

Note: "Light" vehicles meaning cars, "Heavy" vehicles meaning trucks and liquid tankers

1.3 TRAFFIC IMPACT SIDRA SUMMARY

A traffic and parking assessment was undertaken by ML Traffic Engineers Pty Ltd.

The two nearby intersections were assessed using SIDRA software analysis for Level of Service (LoS):

- Priority intersection of Fairford Road with Gow Street
- Stop intersection of Gibson Avenue with Gow Street and Stiles Avenue

Table 1-2 displays the SIDRA criteria for intersection operating performance.

Table 1-2: Level of Service (LoS) for intersections

LoS	Traffic Signal / Roundabout	Give Way / Stop Sign / T Junction control
A	Good operation	Good operation
B	Good with acceptable delays and spare capacity	Acceptable delays and spare capacity
C	Satisfactory	Satisfactory, but accident study required
D	Operating near capacity	Near capacity & accident study required
E	At capacity, at signals incidents will cause excessive delays.	At capacity, requires other control mode
F	Unsatisfactory and requires additional capacity, Roundabouts require other control mode	At capacity, requires other control mode

SIDRA analysis of the existing intersections show LoS A or B for the AM and PM peak hours for the priority intersection of Fairford Road with Gow Street, and a LoS A or B for the AM and PM peak hours for the stop intersection of Gibson Avenue with Gow Street and Stiles Avenue. Both intersections have spare capacity.

SIDRA analysis of the proposed trips on intersections show LoS A or B for the AM and PM peak hours for the priority intersection of Fairford Road with Gow Street, and a LoS A or B for the AM and PM peak hours for the stop intersection of Gibson Avenue with Gow Street and Stiles Avenue. The additional trips do not change the LoS for any turn movements or the overall intersections.

In summary, the proposed development will be a low trip generator for the weekday AM and PM peak hours. The additional trips from the proposed dewatering facility can be accommodated at the nearby intersections without significantly affecting intersection performance, delays or queues.

2. SITE LAYOUT

The existing development site is a fully developed industrial premises with a total area of approximately 10,115 m². The entire site consists of sealed concrete hardstand. An aerial view of the site is shown in Figure 2-1.

There is currently no existing vegetation or landscaping on the site. Existing vehicle access to the site is via two driveways from Gow Street. Vehicles currently enter and exit via the western driveway. The eastern driveway is a service driveway. There are nine (9) existing car spaces located adjacent to the western entry driveway that are used by staff.

There are currently two weighbridges at the site. Trucks are required to be weighed upon entry and exit to the site. A wheel wash is located along the western boundary prior to the weighbridge on the exit driveway. All trucks currently leave the site after passing through the wheel wash.

Figure 2-1: Aerial view of the site



2.1 ON-SITE TRAFFIC

Existing on-site vehicles include:

- Front End Loader x 2;
- Excavator x 2; and
- Trucks x 3.

Mobile plant and vehicles operating on site shall meet statutory requirements and have the required registration, licences or certification where required. All mobile plant and vehicles shall be fitted with suitable reversing alarms.

Other vehicles accessing the site include:

- Cars of site staff and visitors to the parking areas only;
- Medium rigid trucks;
- B-Doubles; and
- Liquid tanker trucks.

With the facility operating at maximum proposed capacity, heavy vehicle trips per day are expected to include 44 on average for the C&D facility, and 128 for the dewatering facility.

3. TRAFFIC MANAGEMENT

3.1 TRAFFIC ENTRANCE AND EGRESS PROCEDURE

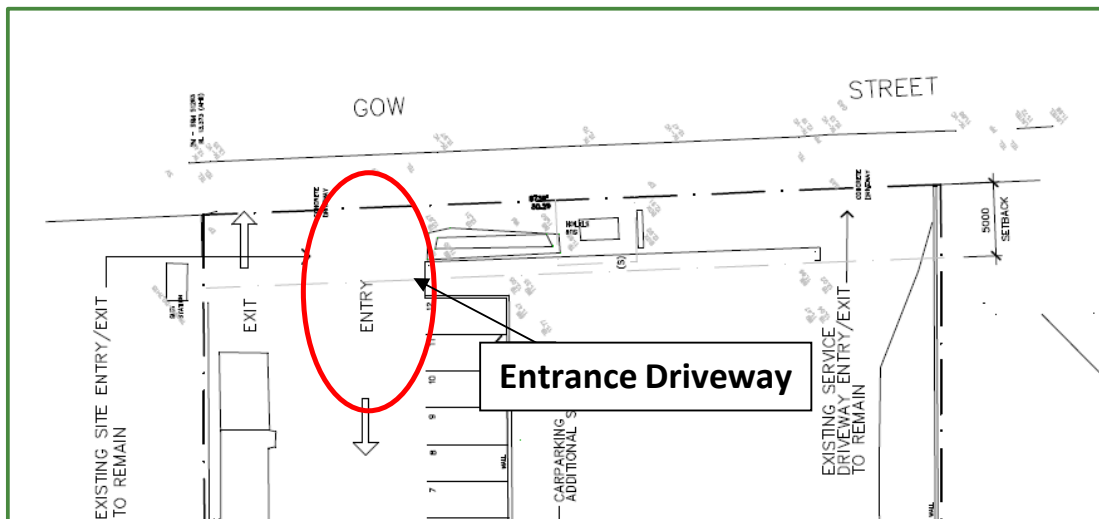
All plant traffic, staff and visitor vehicles are to enter and exit in a forward direction via the western driveway at 81 Gow Street. Access and egress to the carpark is via this driveway from Gow Street. The site entrance will be clearly sign-posted indicating that this is the only entrance & exit for all plant vehicles to the site.

A second eastern entrance is for service vehicles only.

3.1.1 Main Driveway Entrance

All plant traffic is to enter in a forward direction via the driveway at 81 Gow Street (Figure 3-1). The Traffic Control Officer will direct trucks to the first weighbridge and then to the correct area on site. Trucks are required to be weighed upon entry to the site.

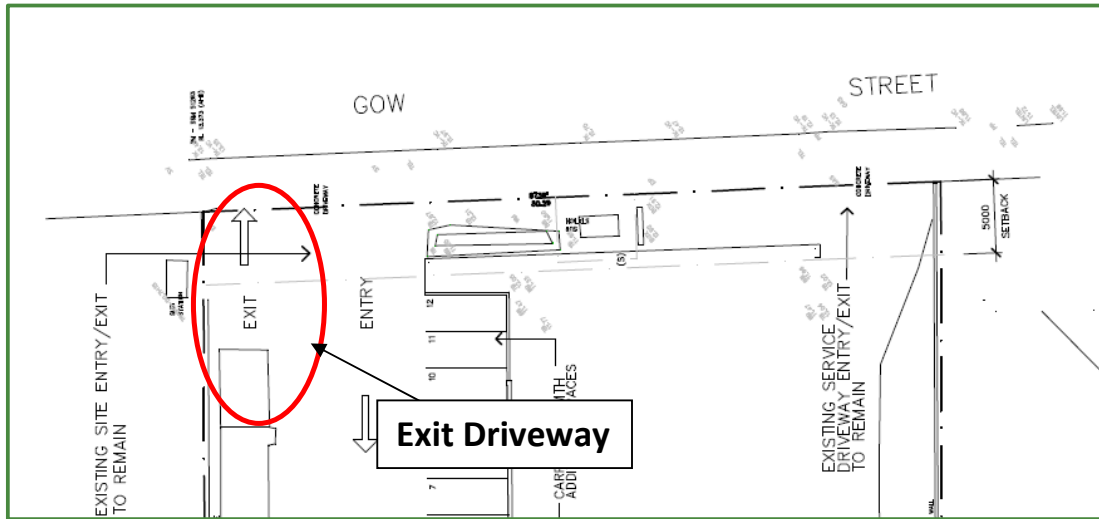
Figure 3-1: 81 Gow Street Entrance Driveway



3.1.2 Truck Egress

All plant traffic is to exit in a forward direction via the main (western) driveway at 81 Gow Street (Figure 3-2). All trucks would leave the site after passing through the wheel wash and then a weighbridge. Trucks are required to be weighed before exiting the site.

Figure 3-2: 81 Gow Street Exit Driveway



3.2 UNLOADING/LOADING

There is ample area on the site to accommodate loading, unloading and waiting trucks. Figure 3-3 shows the layout of the site to accommodate unloading at the dewatering plant and C&D facility, and the waiting areas.

Site plan of the proposed additions to the existing building with new process equipment. The plan shows various functional areas including C&D loading, waiting for C&D load/unload, unloading, waiting for unloading to dewatering plant, unloading in dewatering plant, truck entering, waiting bay, existing wheel wash bay to remain, existing weighbridge, existing site entry/exit to remain, and existing service driveway entry/exit to remain. The plan also indicates the location of the existing conc. block boundary wall and the street.

3.2.1 Dewatering Facility

Full tankers entering the site to unload liquid will enter in a forward direction via Gow St and reverse into the dewatering building in accordance with the swept paths shown in Attachment 1. If the building is occupied by another truck, the next vehicle may wait in one of the designated waiting bays shown in Figure 3-3.

Once the tanker is empty, it may manoeuvre and leave the facility in a forward direction, passing through the wheel wash and weighbridge upon exit.

3.2.2 C&D facility

Trucks entering the site to unload/load C&D materials will enter in a forward direction via Gow St and manoeuvre into the loading/unloading areas in accordance with the swept paths shown in Attachment 1. If the desired loading/unloading is occupied by another truck, the next vehicle may wait in the designated waiting bays or in the waiting area at the front of the site.

Once the C & D truck has completed its required unloading/loading, it may manoeuvre and leave the facility in a forward direction, passing through the wheel wash and the weighbridge upon exit.

3.3 TRAFFIC QUEUING

Queuing of vehicles and overflow traffic is a potential hazard during peak traffic times. Trucks are not to queue on the street. Figure 3-4 shows the layout of the site to accommodate 5 entering rigid trucks queuing 7 exiting rigid trucks. If necessary, there is ample space onsite for trucks to wait before queuing to exit the site.

Staff would be on site at all times to direct trucks if necessary.

The following table provides a breakdown of vehicle waiting and activity during peak operations.

Table 3-1: Vehicle Waiting and Activity - Peak Operations

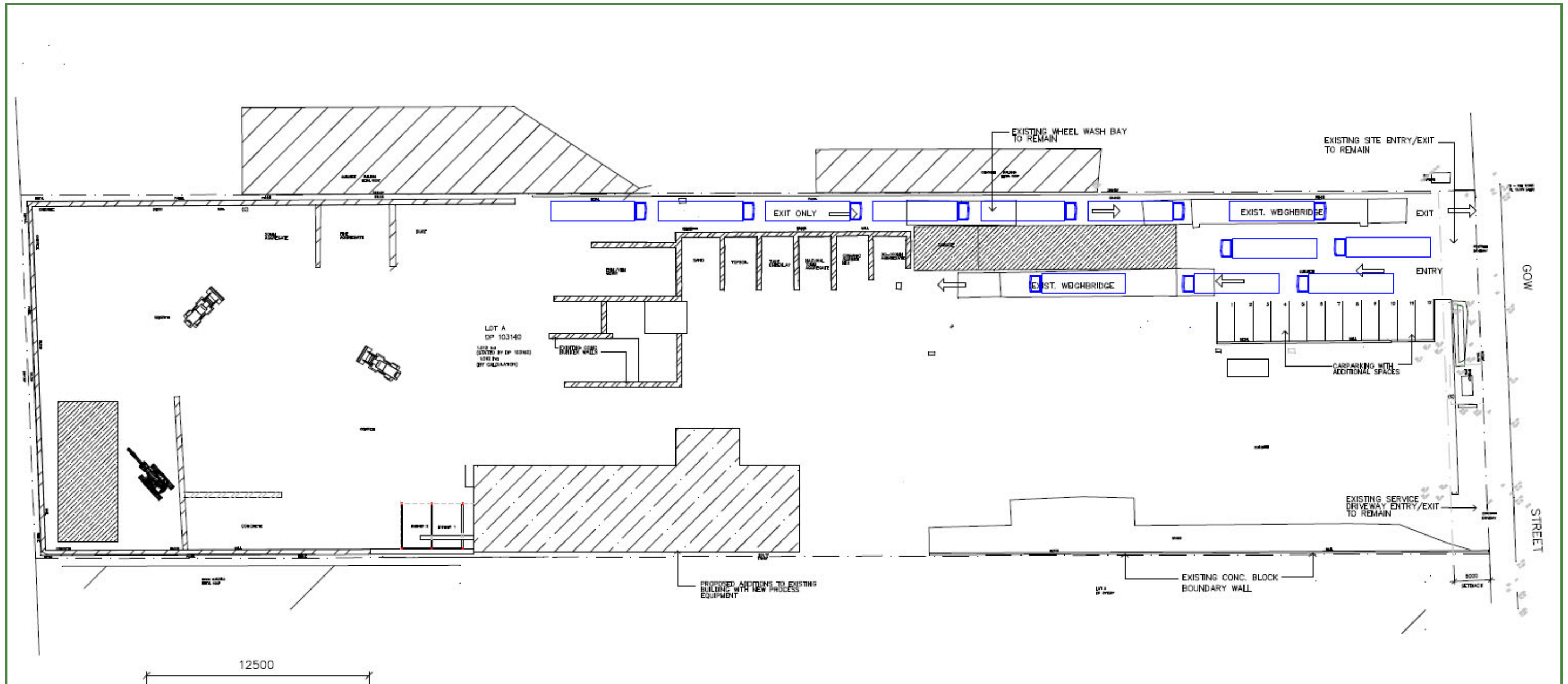
Activity	Details
Vehicles waiting to access the site	Up to 2 vehicles can wait in-front of the weighbridge prior to entering the site;
Vehicles at weighbridge	Up to 2 vehicles can weigh on the weighbridge at any one time;
Vehicle load inspections	Up to 3 vehicles either on the weighbridge or in front of the weighbridge can be untarped for load inspection prior to entering the site.
Vehicles within the site, waiting to access unloading areas	Up to 2 vehicles can wait behind the weighbridge at any one time waiting to access the unloading/loading areas
Vehicles unloading/loading times	Up to 3 vehicles can unload at any one time. 1 vehicle can load at any one time. Typically unloading and loading takes approximately 5 minutes.
Vehicles exiting the site	Up to 2 vehicles can wait behind the weighbridge at any one time waiting to leave the site



Table 3-1: Vehicle Waiting and Activity - Peak Operations

Activity	Details
Difference between weekdays and weekends	Weekdays are busier than weekends. Total number of vehicles on weekends is approximately 30% of the total number of vehicles on a weekday. The weekends often have more box trailers, as smaller jobs (households) arrive on site on the weekends.

Figure 3-4: Truck queuing



3.3.1 Emergency Plant Shut Down

In the event of an emergency plant shut down, up to 5 rigid truck can queue in the driveway safely. Any planned incoming trucks will be contacted and directed away from the site.

3.4 PARKING ARRANGEMENTS

There are 9 existing car spaces. An additional 6 will be provided. In total the proposed development will comprise 15 car spaces including 12 spaces adjacent to the entrance driveway and 3 spaces in the garage adjacent to the office building.

3.5 NOTIFICATION ON ARRIVAL

3.5.1 Trucks

All loads are required to be weighed on arrival and departure. Upon entering the facility all truck loads are required to report to the weighbridge staff. The load will be weighed and recorded at the weighbridge. The following information is recorded as per the Waste Management Plan:

Incoming Loads:

- Date & time received;
- Name of customer;
- Address of facility received from/customer address;
- Weight of load;
- Vehicle registration number;
- Name of driver; and
- Details of any unauthorised waste found in load.

Outgoing Loads:

- Date & time dispatched;
- Name of destination;
- Address of destination;
- Weight of load;
- Vehicle registration number;
- Name of driver; and
- Contents of load.

This information is kept in the logbook on site.

Should any unauthorised waste be found within the load, the truck driver will be instructed to leave the site immediately via the on-site routes.

3.5.2 Cars

All staff and personnel are required to park in designated spaces on site and report to the office on arrival. Visitors are required to sign in at reception. Signage indicating the location of reception is provided on site.

Only authorised vehicles will be allowed access on-site past the weighbridge. All cars must enter and leave the site in a forward direction.

3.6 RESPONSIBILITIES

Site Manager

- Oversees the implementation of the traffic management plan;
- Ensure all traffic signage and markings are provided and maintained;
- Ensure staff and contractors are aware of their responsibilities under the site TMP;
- Review and update the site TMP.

Weighbridge personnel

- Record all incoming and outgoing truck loads as per Section 3.5.1;
- Direct trucks to appropriate loading and/or unloading areas;
- Ensure drivers are aware of the site speed limit;
- Ensure unauthorised loads are not accepted;
- Report all incidents and near misses to site manager.

Drivers

- Report to weighbridge staff;
- Undertake loading and/or unloading in dedicated areas;
- Obey the site speed limit, all traffic signage on site and instructions given by site staff;
- Ensure all care and safety is taken to prevent personal injury and injury to others.
- Report all incident and near misses to site personnel.

Contractors and visitors

- Report to reception;
- Park in dedicated car parking spaces;
- Obey the site speed limit and other traffic signage on site;
- Ensure all care and safety is taken to prevent personal injury and injury to others.
- Report all incident and near misses to site personnel.

3.7 SPEED LIMITS

Workplace speed limits are set at 5 km/hr with clearly displayed signage at the entrance to the site. Figure 3-5 displays an example of a speed limit sign to be installed at the site entrance.

Figure 3-5: Speed Limit Sign



3.8 TRAFFIC CONTROL OFFICER

The traffic control officer responsibilities are provided below:

- A nominated traffic control officer is to be present on site at all times during operation.
- The traffic control officer(s) is/are responsible for truck scheduling.
- The traffic control officer(s) is/are responsible for directing vehicles to the waiting areas and loading or unloading areas.
- The traffic control officer(s) are to be allocated a working CB radio to undertake communications with truck drivers.
- The traffic control officer(s) is/are to ensure vehicles follow instructions given as per the procedures presented in the traffic management plan.

3.9 SITE INSPECTIONS & AUDITS

Site inspections and audits will be undertaken in accordance with the site's Environmental Management Plan (EMP). Issues related to traffic management are included in the Workplace Inspection Checklist as part of the site's EMP.

3.10 INCIDENT REPORTING

Incidents and near misses in relation to on-site traffic will be dealt with in accordance with the incident response and investigation procedures in Site's EMP.

This concludes the report.



Kate Barker
Environmental Scientist



R T Benbow
Principal Consultant

4. LIMITATIONS

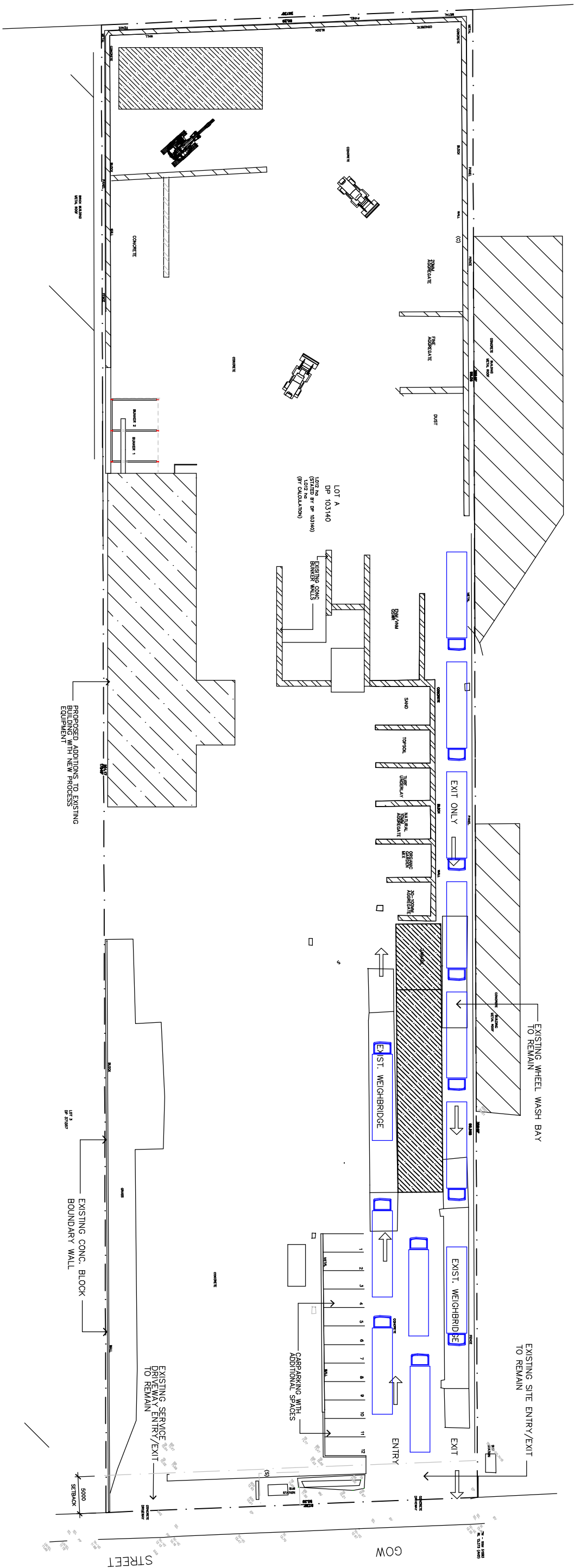
Our services for this project are carried out in accordance with our current professional standards for site assessment investigations. No guarantees are either expressed or implied.

This report has been prepared solely for the use of Gow Street Recycling Centre, as per our agreement for providing environmental services. Only Gow Street Recycling Centre is entitled to rely upon the findings in the report within the scope of work described in this report. Otherwise, no responsibility is accepted for the use of any part of the report by another in any other context or for any other purpose.

Although all due care has been taken in the preparation of this study, no warranty is given, nor liability accepted (except that otherwise required by law) in relation to any of the information contained within this document. We accept no responsibility for the accuracy of any data or information provided to us by Gow Street Recycling Centre for the purposes of preparing this report.

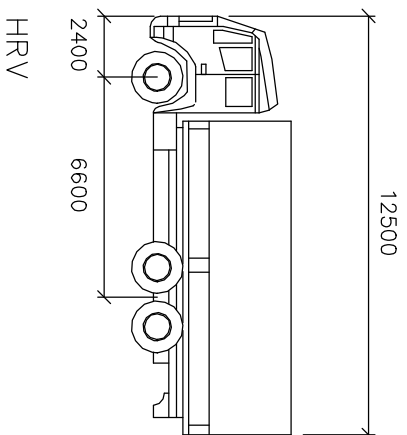
Any opinions and judgements expressed herein, which are based on our understanding and interpretation of current regulatory standards, should not be construed as legal advice.

ATTACHMENTS



RIGID TRUCK QUEUING PLAN

SCALE 1:250



	mm
Width	: 2500
Track	: 2500
Lock to Lock Time	: 6.0
Steering Angle	: 35.2

ISSUE BY	DESCRIPTION	DATE			PROJECT NO.
A	GR ISSUE FOR DA	20-4-21			1730
GOV STREET RECYCLING CENTRE STREET					
GENERAL NOTES: 1. ALL DIMENSIONS AND FLOOR LEVELS ARE TO BE VERIFIED BY THE BUILDER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE BUILDER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE RELEVANT AUTHORITIES. 2. LEVELS SHOWN ARE APPROXIMATE UNLESS ACCOMPANIED BY REDUCED LEVELS FROM A DETAILED SURVEY. 3. PROPOSED DIMENSIONS MUST BE TAKEN IN PREFERENCE TO SIZING. 4. ALL CONSTRUCTION WORK SHALL BE COMPLETED PRIOR TO COMMENCEMENT OF ANY BUILDING WORK. 5. ALL CONSTRUCTION WORK SHALL BE COMPLETED PRIOR TO THE START OF THE BUILDING WORK. 6. ALL SERVICES TO BE LOCATED AND VERIFIED BY THE BUILDER WITH RELEVANT AUTHORITIES BEFORE ANY BUILDING WORK COMMENCES. 7. ALL SERVICES TO BE LOCATED AND VERIFIED BY THE BUILDER WITH RELEVANT AUTHORITIES BEFORE ANY BUILDING WORK COMMENCES. 8. THE BUILDER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE RELEVANT AUTHORITIES. 9. THE BUILDER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE RELEVANT AUTHORITIES. 10. THE BUILDER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE RELEVANT AUTHORITIES.			DATA SHEET DATE: 20/04/21 BY: [Signature]		
GOV STREET RECYCLING CENTRE STREET			STYLE DEVELOPMENTS PTY LTD 2051-2055 THE NORTHERN ROAD GLINSMORE PARK NSW 2745 M: +61 2 419 404 103 E: info@styledevelopments.com.au W: www.styledevelopments.com.au ARCHITECTURAL DESIGN ENGINEERING CONSTRUCTION PROJECT MANAGEMENT		
PROJECT PROPOSED RESOURCE RECOVERY 81-87 GOW STREET PADSTOW LOT A DP103140			CLIENT GOV STREET RECYCLING PTY LTD		
TITLE RIGID TRUCK QUEUING PLAN			JOB NO. 0212/20		
SHEET NO. A08			SCALE 1:250		

